1859

The Chemist and Druggist

1909

REGISTERED AS A NEWSPAPER FOR TRANSMISSION ABROAD.

Jubilee Number & Summer Issue

VOL. LXXV.
No. 1540.

JULY 31, 1909

Subscription 10s. per annum.
Summer and Winter Issues, 1s. each.

FOUR SUGGESTIONS FOR
WINDOW ARRANGEMENT
of Packed Drugs, Toilet Preparations
and Toilet Soaps
with labels bearing Pharmacist's own name and address.
ALLEN & HANBURYS LTD., LONDON.

LONDON OFFICE: 42 CANNON ST., E.C.

MAY & BAKER,

Manufacturing Chemists,

GARDEN WHARF, BATTERSEA,

LONDON, S.W.

Desire the attention of wholesale druggists to a few of the principal articles of their manufacture, for the superior quality of which First Class Medals were awarded to them at the London Exhibition 1851, and at the Paris Exhibition 1855.

The Current Prices forwarded on application by Post.

Acid, Benzoic	Hydrarg. Ammonio Chlor.	Magnesia Calc. Pond.
„ Nitric	„ Bichlorid	Magnesiæ Carb. Pond.
Antim. Crocus	„ Chloridum	Potassæ Acetas
„ Murias	„ Cum Creta	Potassii Cyanidum
„ Oxysulphuretum	„ Nitrico Oxydum	Sp. Æther. Nitr. Sp. Gr. 850
„ Potassio Tart.	„ Sulphas	Sp. Ammoniæ Arom.
„ Sulphuretum	„ Sulph. c̄ Sulph.	Sulphur Præcip. Ver.
Argenti Nitras	Liquor Amnon. Fortissim.	Ung. Hydr. Fort.
Bismuth, Nitras	„ Calcis Chlor. Fort.	Zinci Acetas
Camphor Ang. Purif.	„ Magnes. Bicarb.	„ Chlorid
Cheltenham Salt	„ Sodæ Chlor.	„ Oxydum
Creta Præcip.	„ Vol. C. C.	„ Sulphas Purif.

The above is a copy of our advertisement in the first issue of "The Chemist and Druggist."

Our products still retain that superiority of quality which constituted their chief recommendation fifty years ago, and the pharmacist who specifies

MAY & BAKER

obtains British-made chemicals of standardised purity at the lowest market rates.

GOODALL, BACKHOUSE & CO.

Analytical & Manufacturing Chemists.

Wholesale and Export Druggists.

DRUG AND SPICE GRINDERS, DRYSALTERS, OIL & COLOURMEN, PATENT AND PROPRIETARY MEDICINE DEALERS

Druggists', Grocers', and Italian Warehousemen's Sundries Manufacturers of Tin Canisters, Oil Drums, etc.

OFFICES & WAREHOUSE—WHITE HORSE ST.,
DRUG MILLS & LABORATORIES—SOVEREIGN ST.,

LEEDS.

London Address: 54 Southwark Street, S.E.

GOODALL, BACKHOUSE

IMPORTERS & GRINDERS OF *Drugs and Spices.*

IMPORTERS OF
Olive Oils, Honey, Herbs, Cream of Tartar, &c.

SOLE IMPORTERS OF
"Pocliano" Brand Pure Liquorice Juice.

AND OF **"HARDY NORSEMAN BRAND"** FINEST
NON-FREEZING NORWEGIAN COD LIVER OIL.

TINCTURES, ESSENCES, FLUID EXTRACTS, &c., IN BOND.

Packers of CHEMISTS' COUNTER GOODS.
TIN CANISTER MAKERS.

Specialties.

Emulsions
Flavour Essences
Effervescent Preparations
Fruit Syrups
Milled Ointments
Compound Liquorice Powder, &c., &c.

Copies of Price Lists
(HOME OR EXPORT)
SENT POST FREE ON APPLICATION.

Correspondence Invited.
Telegram and Cable Address
"RELISH LEEDS."
"RELISH LONDON."

Goodall, Backhouse & Co., Leeds,
and 54 Southwark Street, London, S.E.

& COMPANY, LEEDS.

Special Notice.

MERCHANT SHIPPERS AND EXPORT AGENTS

To Buyers of

DRUGS, CHEMICALS, SPICES, TINCTURES,
CITRATE OF MAGNESIA,
CREAM OF TARTAR,
TARTARIC ACID, BORAX, &c.

(SPECIAL QUOTATIONS FOR LARGE QUANTITIES.)

We are Importers of

CASTOR OILS,
OLIVE OILS,
COD LIVER OILS, ESSENTIAL OILS, &c.

(IN ORIGINAL PACKAGES, OR NEATLY BOTTLED FOR RETAILERS.)

Manufacturers of

BAKING POWDER,
CUSTARD POWDER,
JELLY POWDER,
CURRY POWDER, &c. &c.

(PACKED IN ALL STYLES FOR EXPORT.)

Sole Manufacturers of

THE CELEBRATED YORKSHIRE RELISH.

Goodall, Backhouse & Co., Leeds,

and 54 Southwark Street, London, S.E.


YORKSHIRE
RELISH
ANTICIPATION

INDEX TO ADVERTISEMENTS IN THIS ISSUE.

HEAD OFFICE: 42 Cannon Street, London, E.C. Telegraphic Address: "CHEMICUS LONDON." Telephone No. 852, Bank.
BRANCH OFFICES: MELBOURNE, SYDNEY, AND ADELAIDE, AUSTRALIA.

Page

Aerators, Ltd. .....90 & 91
Alabastine Co. (British), Ltd. 199
Albrethson, A., & Co. 147
Allcock's Plasters 188
Allen & Hanburys, Ltd. *Inset, Cover*, 87, 162
Allen, Stafford, & Sons, Ltd. 18, 19
Alliance Drug & Chemical Co. 173
American Drug Stores, The ... 147
Anglo-American Drug Co. ... 160
Antineurastbin Co. .....*Inset.*
Apollinaris Co., Ltd. .....*Cover*
Armour & Co., Ltd. 32
Ayrton-Graham, Ltd. 76
Ayrton, Saunders & Co., Ltd. 58

Bailey, W. H., & Son, Ltd. ... 185
Baiss Bros. & Steveuson, Ltd. *Inset*
Barnett & Foster .....92 & 93
Bath and West of England School 68
Battle, Son & Maltby 206
Bausch & Lomb Optical Co. ...*Inset*
Bayer Co., Ltd., The 114
Beecham, T. 211
Beetham & Son 42
Bell, Hills & Lucas, Ltd. 134
Benger's Food, Ltd. 103
Bennett, E., & Son, Ltd. 88
Bennett, Sons & Shears, Ltd. 86
Berdoe & Fish .....*Col. Supp.*
Berkofeld Filter Co., Ltd. 100
Berliner, Arthur 181
Bidwell, Bidwell & Co. 42
Birmingham College of Pharmacy 68
Blackie, R. .....152 & 153
Boake, Roberts, A., & Co., Ltd. 29
Boehringer, C. F., & Soehne ... 134
Boebringer, C. H., Sohn 177
Boling, Brown & Co. 177
Bontcheff & Kidoff 28
Bowling & Son 76
Box, W. H. 177
Bradley & Bourdas 206
Brand & Co., Ltd. 109
Breffits, Ltd. 191
Breidenbach & Co. 17
Brett & Co. .....*Col. Supp.*
Bristol-Myers Co. 177
British Automatic Aerators, Ltd. 94
British Dia-Malt Co. .....154 & 155
British Drug Houses, Ltd. 128
British Optical Institute 74
Bronnley, H., & Co., Ltd. *Inset* & 30
Brown & Blackburn 208
Brunner, Mond & Co., Ltd. *Inset*
Burge, Warren & Ridgley, Ltd. 178,179
Burgess, E. 147
Burrough, J., Ltd. 57
Burroughs Wellcome & Co. 125, 126, 127
Burt, Boulton & Haywood, Ltd. 204
Bush, H. W., & Co., Ltd. 31
Bush, W. J., & Co., Ltd. .....*Inset*
Butler & Tanner .....*Inset*
Buvo, Ltd. 107

Cadbury Bros., Ltd. .....*Cover*
Callard & Co. 208
Calvert, F. C., & Co. 43
Casein, Ltd. 102
Chalk & Co. 75
Chemists' Co-operative Wholesale 174, 175
Chesebrough Mnfg. Co. .....33 & 64
Chiris, Antoine 34
Christy, T., & Co. .....63 & 209
Chuit, Naef & Co. 28
Clark, S., & Co. 75
Clark's Salesmanship Book Dept. .....*Inset*
Coleman & Co., Ltd. 101
Compagnie Morana 34
Condy & Mitchell, Ltd. 113
Congreve, G. T. 168
Cook, E., & Co., Ltd. 38
Corry & Co., Ltd. 204
Cox, A. H., & Co., Ltd. 157
Cresp-Martinenq 24
Cresswell Bros. & Schmitz Branch, International Sponge Importers, Ltd. 49
Crown Chemical Works, Ltd. *Inset*
Curry, H. 177
Daggett & Ramsdell 29

Page

Daisy, Ltd. 110, 111
Danysz Virus, Ltd. 204
Darter, Wilkinson & Co. 75
Darton, F., & Co. 83
Davies, Sons & Co. 164
Davol Rubber Co. 184
Day & Sons (Crewe), Ltd. 147
Deansmere Manfg Co. 197
Degen, F. A. 78
Denoual, J., & Co. .....*Inset* & 36
De St. Dalmas & Co. 185
Detsinyi, F. 208
Dun, R. T. .....*Inset*
Duncan, Flockhart & Co....144, 145
Edinburgh Central School of Pharmacy 69
Edwards' Harlene Co. .....*Inset*
Edwards, S. 26
Edwards, W., & Sons 56
Erasmic Co., Ltd. .....*Inset* & 36
Erhardt, H., & Co. 74
Esfon 177
Estes, E. B., & Sons .....*Inset*
Eucryl, Ltd. .....*Inset*
Evaus, Gray & Hood 102
Evans' Sons Lescher & Webb Ltd. .....*Inset* & 39, 139, 161
Evenden's Pure Extraots, Ltd. 210
Exchauge Column .....*Col. Supp.*
Express Developing Co. 210

Fairchild Bros. & Foster 122 & 123
Farina, J. M. 16
Farina, J. M., No. 4 .....*Inset*
Faulding, F. H., & Co. 26
Fecher, M. J. 190
Fellows Mnfg. Co., Ltd. 136
Fentiman, A. G. 208
Fentimau, A. J., & Co. 209
Field, C. W. 94
Findlater & Co. .....*Inset*
Fink, F. H., & Co. 208
Fletcher, Fletcher & Co., Ltd. *Text* 182 & *Inset*
Ford, Shapland & Co. 80
Frame Food Co., Ltd. 116
Frankenstein, E. N., & Co. ... 26
Frowein, C. 197
Fulford, C. E., Ltd. 112
Fullwood, R. J , & Bland 106

Gaasch, J. B. 207
Gardner, W., & Sons (Gloucester), Ltd. .....*Inset*
Garman Bros. .....*Text* 182
Gerhardt, C. F. 209
Gillette Safety Razor, Ltd. ... 47
Gimber, W., & Son 188
Glasgow School 68
Goodall, Backhouse & Co. 1, 2, 3, 4
Gosnell, J. & Co., Ltd. .....*Inset*
Grant, D. .....*Inset*
Grapelax, Ltd. 208
Great Western Railway 94
Guy's Tonic Co. 171

Halder, E. C. 208
Halifax Photographic Co. 74
Hampshire, F. W., & Co. .....*Inset*
Harker, G., & Co. 102
Harker, Stagg & Morgan, Ltd. 46
Harrington Bros. 78
Harrison & Waide 207
Harvey & Co. (Dublin), Ltd. 202
Hatrick, J. L., & Co., Ltd. 182, 183
Hay, Wm., Ltd. 97
Haynes, Geo., & Co. 208
Henry, T. & W. .....142 & 143
Herpicide Co., The 42
Hewlett, C. J., & Son, Ltd. *Inset* & 160
Hicks, J. J. 79
Hollingshurst & Co. 209
Holzmuller & Schmidt 40
Horner & Sons 133
Howards & Sons, Ltd. 130, 131
Hughes, E. Griffiths 209
Hull Oil Mnfg. Co., Ltd. 160
Huntley, Boorne & Stevens, Ltd. 76
Hutchinson Co., The 187
Ichthyol Co. .....*Inset*
Idris & Co., Ltd. 99
Ingram & Royle, Ltd. 93
International Chem. Co. 209
Iron-Ox Remedy Co., Ltd. 156
Isaacs, I., & Co. 192

J.S.W. Preps. 52
Jackson, E. E. 96
Jeyes' Sanitary Compounds Co., Ltd. 202

Page

John, H. C. 205
Johnson & Jorgensen, Ltd. ... 193
Johnson, Matthey & Co., Ltd. 78
Kay Bros., Ltd. 197
Keane, T. 74
Kearsley, C. & G. 146
Kemp, F., & Co., Ltd. 116
Kent, G. B., & Sons, Ltd. ...50, 51
Kilner Bros., Ltd. 194
Kingsley & Thackeray Hotels, Ltd. .....*Inset*
Lalor, Dr. 152
Lambert Pharmacal Co. 116
Lang, Jules & Son 195
Last & White 209
Leeds College of Pharmacy ... 68
Leslies, Ltd. 208
Lesoel Perfumery Co. 37
Levermore, A., & Co. ...172 & 208
Lewis, H. K. 70
Lhermine & Cie. 29
Lindsey, S. C., & Co., Ltd. ... 208
Liverpool Lint Co. 189
Liverpool School 69
Lloyd, A. S. 46
Lloyd, Aimée, & Co. 47
Lloyd, T. H., & Co. 159
Lofthouse & Saltmer 102
London College of Chemistry 66
Lorimer & Co., Ltd. 156
Lumley, L., & Co., Ltd. 28

McAdam & Tuckniss .....*Col. Supp.*
Macfarlan, J. F., & Co. 149
Mackenzie Cure 198
McKesson & Robbins .....*Inset*
Mallmann, W. 30
Martindale, W. 70, 140, 141
Martiné & Co. 44
Maw, S., Son & Sons 53
Mawson & Co. 209
Mawson Filter Co. .....*Inset*
May & Baker, Ltd. .....*Cover*
May, Roberts & Co. *Cover* & *Inset* & 212
Meggeson & Co., Ltd. 129
Melin, C., & Co. 116
Melrose-Drover, Ltd. 94
Menley & James, Ltd. 106
Merck, E. 137
Merkham Trading Co., Ltd. ... 46
Millar, A., & Co., Ltd. 94
Mills, H. 76
Mitchell, N. W., & Sons, Ltd. 130
Mumford, G. S. .....*Text* 182
Murdoch, J., & Co. 152
Muter's (South London) School of Pharmacy 67
National Cash Register Co., Ltd. 71
Natural Food Co., Ltd. ...104, 105
Naumann, W. 29
Newball & Mason 14, 15
Newbery, F., & Sons, Ltd. 54, 55
Newsome, C. 186
Nichols Chem. Co., Ltd. 166
Nicholls & Co. 209
Nitsche & Günther 81
Northern Coll. of Pharmacy... 66
North of England School 66
North Staffordsbire School of Pharmacy 63
Norwich Crepe Co. (1856), Ltd. 188
Oakey, J., & Sons, Ltd. 205
O'Brien, Thos. 77
Oldfield, Pattinson & Co. 9, 13
O'Neil, Zetts, & Co. 40
Oppenbeimer, Son & Co., Ltd. 120 & 121
Orridge & Co. .....*Col. Supp.*
Owbridge, W. T., Ltd. 165
Page, S. D., & Sons, Ltd. ...*Inset*
Paine & Co., Ltd. 167
Papier Poudré, Ltd .....*Inset*
Parke, Davis & Co. .....118 & 119
Parnall & Sons, Ltd. .....72 & 73
Peake, Allen & Co. 207
Pears, A. & F., Ltd. .....*Inset*
Perken, Son & Co. 75
Pill, Tablet & Capsule Alliance 170
Pindar, J. W., & Co. 209
Pitman, Sir Isaac, & Sons, Ltd. 78
Plastic Advertisement Co. 74
Poppelreuter, W. 26
Poths, H., & Co. 190
Potter & Clarke 176
Premier Oil Extracting Mills, Ltd. 134
Prescriber, The 69
Preston's Liverpool Distillery Co., Ltd. 56
Quelch & Co. 48

Page

Raimes & Co. 136
Randall & Son, Ltd. 48
Ransom, Wm., & Son 25
Reitmeyer & Co. 117
Rendell, W. J. 186
Reuter, R. J. 115
Resinol Chemical Co. 158
Roberts, Cornford & Co. 40
Robinson & Sons, Ltd. 59, 60, 61, 62
Robinson, B., & Co., Ltd. 94
Rogers & Co. 79
Rowland, A., & Sons 41
Rudduck & Co. .....*Inset*
Saccharin Corporation, Ltd... 98
Sachsse, E., & Co. 27
Salle, H., & Co. 102
Sangers' 124
Sanitas Co., Ltd. .....*Text* 182
Sankyo & Co. 201
Schimmel & Co. 146, 20, 21, 22, 23
Schmoller & Bompard 35
Schneider & Co. .....*Inset*
School of Pharmacy 66
Schutze, F., & Co. 41
Scrubb & Co., Ltd. 48
Senier, A., & Co. 44
Shaw, H., & Co. 30
Shipkoff & Co. 35
Singleton & Cole, Ltd. 208
Slack, B. 82
Smith, B. A., & Co. 132
Smith, J. A. .....*Inset*
Smith, J. H., & Co. 200
Smith, Stanistreet, & Co. 134
Smith, T. & H., Ltd. 148
Solazzi 96
Solport Bros. 196
South of England School 66
Spottiswoode & Co., Ltd. .....*Inset*
Spratt's Patent, Ltd. .....*Inset*
Squire & Sons 135
Standard Tablet & Pill Co. *Inset* & *Text* 182
Stedman, Dr. 172
Stevens, P. A. 208
Stevenson & Howell, Ltd .....*Inset*
Sthamer, Dr. R. 95
Stipendum Stopper Co. 79
Stokes, F. J., Machine Co....84 & 85
Strong, Christy 197
Stuart Plaster Pad Co. 190
Sturge, J. & E. 164
Sutton, Sons & Co. .....*Inset*
Thermos Flask 89
Thompson & Capper .....84 & 85
Tilbury & Co. 42
Todd, A. M., Co., Ltd. 35
To-Kalon Mfg. Co. 56
Tomlinson, T., & Son ...*Col. Supp.*
Toogood, W., Ltd. 184
Tunbridge & Wright 198
Tye, J., & Son 188
Tyrer, Thos., & Co., Ltd. 151
University of Birmingham ... 66
Van Abbott, G., & Sons 208
Vernon & Co., Ltd. 185
Vichy Water 96
Viscose Development Co., Ltd. *Inset*
Voss, W., & Co., Ltd. 209
Walker, Troke & Co. 56
Wand Mfg. Co. 201
Wander, Dr. A. 108
Wanklyn, H. A. 45
Wardale & Co. 209
Warne, W., & Co., Ltd. 180
Warrick Bros. .....*Text* 182
Washington Chem. Co., Ltd.... 207
Watford Embossing Co. .....*Inset*
Wattenbach, Oscar 208
West, T., & Son 42
Westminster College 69
Whitaker & Co. 44
White, A., & Sons 138
White, E. A., Ltd. 201
Whitehead, R. R., & Bros., Ltd. 185
Wilcox, Jozeau & Co. .....*Text* 182
Wilkinson & Simpson, Ltd. ... 146
Wilson Vet. Medicine Mfg. Co. 208
Wood, V. .....185 & 188
Woods, W., & Son 42
Woolley, J., Sons & Co., Ltd. 11 & 12
Woolley's, Ltd. .....*Text* 182 & 169
Youldon, E., Ltd. 207
Young's Absorbine 201
Zeal, G. H. 65
Zimmer & Co. 185
Zimmermann, C., & Co. 150
Zotos. Ltd. 163

LIST OF INSETS APPEARING IN THIS ISSUE

		BETWEEN PAGES
ALLEN & HANBURYS, Ltd....	Four Illustrations in Colours for Window Arrangement	Loose
ANTINEURASTHIN CO., THE	"Antineurasthin" (Brain and Nerve Food) and "Pulchrit" Face Powder	148—149
BAISS BROS. & STEVENSON, Ltd. ...	Wholesale Druggists, "Othniel" Brand and other Specialities, Cod Liver Oil Emulsion	32— 33
BAUSCH & LOMB OPTICAL CO.	Microscopes, Laboratory and Photographic Apparatus, Spectacle Lenses	64— 65
BRONNLEY, H., & CO., Ltd.	Otto of Violets and "Havanita" Perfumes and Soaps	32— 33
BRUNNER, MOND & CO., Ltd.	Mineral Water Bicarbonate and Instructions for Use	64— 65
BUSH, W. J., & CO., Ltd.	Fruit Essences	32— 33
BUSH, W. J., & CO., Ltd.	Buisson Frères' Carnation Perfume	32— 33
BUTLER & TANNER...	Talks on Printing	180—181
CLARK'S SALESMANSHIP BOOK DEPT....	"Successful Salesmanship" (Home Copies only)	148—149
CROWN CHEMICAL WORKS, Ltd., THE ...	Price List of Artificial and Genuine Essential Oils	148—149
DENOUAL, JULES, & CO.	Price List of Lozenges, Tablets, Capsules, Eucalyptus Oil, Dentifrices, Perfumes, and Sundries	Loose
DUN, R. T.	New Series of "Own Named" Capsules in Metal Boxes	148—149
EDWARDS' HARLENE CO.	Window Dressing Competition	64— 65
ERASMIC CO., Ltd., THE	"Erasmic" Window Display Competition, "Duchess" Toilets and Specialities	64— 65
EUCRYL, Ltd.	Speeial Bonus Offer for Counter Displays	64— 65
EVANS SONS LESCHER & WEBB, Ltd. ...	Hawley's Counter Adjuncts	32— 33
FICKUS, COURTENAY & CO.	No. 4 Eau de Cologne	32— 33
FINDLATER & CO.	Price List of Foreign Natural and Mineral Waters	64— 65
FLETCHER, FLETCHER & CO., Ltd. ...	Faesimile Showcard of "Vibrona" and Specimen Window Display	32— 33
GARDNER, W., & SONS (Gloucester), Ltd.	Illustrated Price List of Sifters and Mixers...	180—181
GOSNELL, JOHN, & CO., Ltd.	Illustrated Price List of Perfumes, Toilet Soaps, Nursery Preparations, &e.	Loose
GRANT, D.	Views of Shopfittings	148—149
HAMPSHIRE, F. W.	"Wasp" Fly Band	180—181
HEWLETT, C. J., & SON, Ltd.	Facsimiles of Packed Goods for Chemists (Foreign Copies only)	
ICHTHYOL COMPANY	Ichthyol Labels and Registered Trade Marks	148—149
KINGSLEY & THACKERAY HOTELS, Ltd.	Views of Hotels and Terms	64— 65
McKESSON & ROBBINS	Price List of "McK. & R." Capsuled Pills, "Calox"	148—149
MAWSON FILTER CO., THE	Mawson Filters and "Majax" Infants' Food	64— 65
MAY, ROBERTS & CO., Ltd.	Illustrated Price List of E. B. Estes & Sons' Turned Wood Boxes	Loose
PAGE, S. D., & SONS, Ltd.	"Britonian" Solid-Back Hair Brush	64— 65
PAPIER POUDRE, Ltd.	Price List of Specialities	32— 33
PEARS, A. & F., Ltd.	Pears' Soap	32— 33
RUDDUCK & CO.	Illustrations and Prices of Showcases, Fittings, &c.	180—181
SCHNEIDER, FRANZ & CO.	Chemists' Labels and Seals	64— 65
SMITH, J. A.	Gloria Tonic	148—149
SPOTTISWOODE & CO., Ltd.	"About Printing"	180—181
SPRATT'S PATENT, Ltd.	Spratt's Biscuits "Ovals" and "Midgetts"	180—181
STANDARD TABLET & PILL CO.	Illustrated Price List of Pills, Tablets, Toilet Articles, Counter Adjuncts, &c.	Loose
STEVENSON & HOWELL, Ltd.	Essence of Stone Ginger Beer, Lime Juice and Soda	64— 65
SUTTON, G. F., SONS & CO., ...	Compound Cream of Ammonia	180—181
VISCOSE DEVELOPMENT CO., Ltd. ...	"Viscose" Bottle Caps	32— 33
WATFORD EMBOSSING CO.	Miniature Specimens Embossed Covers, Catalogues or Booklets, Christmas Cards	32— 33

The next occasion when we can receive Circulars and Price Lists for insertion will be the Winter Number, to be published on **Saturday, January 29, 1910.**

CHARGES FOR CIRCULATING 12,000 CIRCULARS, &c.:—

	net		net
2 pp. (1 leaf) size of "The Chemist & Druggist"	£9...$45.00	8 pp. (4 leaves) size of "The Chemist & Druggist"	£18... $90.00
4 ,, (2 leaves) ,, ,, ,,	£12...$60.00	16 ,, (8 ,,) ,, ,, ,, ,,	£27...$135.00

We ask Advertisers to give this matter their attention now, and to communicate with The Publisher, "The Chemist and Druggist," 42 CANNON STREET, LONDON, E.C., who will be happy to give further particulars if desired.

July 31, 1909.

THE BUYERS' GUIDE.

In this section, under appropriate headings, are given the names of firms advertising in this or other issues of the month. No charge is made to advertisers for the insertion of their names, but only those who have contracts current for advertising in this journal are mentioned. The headings refer generally to the classes of goods actually advertised, but this is not a detailed Guide such as appears in "The Chemists' and Druggists' Diary." Inquiries addressed to "The Chemist and Druggist," 42 Cannon Street, London, E.C., regarding articles not appearing in these pages will receive prompt attention.

ACETIC ACID
Boehm, Fredk., Ltd.
Crown Chemical Works, Ltd.

ADVERTISING IDEAS
Allison, J. R. B.
Degen, F. A.
Plastic Advertisement Co.
Slack, Bernard
Smith, W. H., & Son

AER.-WATER MACHINERY
Barnett & Foster
British Automatic Aerators, Ltd.
Roberts, Richard, & Sons
(*See also* SODA FOUNTAINS)

AER.-WATER MATERIALS
Brunner, Mond & Co.
Bush, W. J., & Co., Ltd.
Hay, William, Ltd.
Stevenson & Howell, Ltd.
Sthamer, Dr. Richard
(*See also* ESSENCES, SOL.)

AERATED WATERS
Camwal, Ltd.
Idris & Co., Ltd.
Jewsbury & Brown

AGENCIES, COLONIAL, &C.
Faulding, F. H., & Co.
Holzmuller & Schmidt
Kemp, F., & Co., Ltd.
Lennon, Ltd.
Murdoch, John, & Co.
Peake, Allen & Co.
Sankyo & Co.
Smith, Stanistreet & Co.

AIR CUSHIONS
Hutchinson Co.

ALKALOIDS
Boehringer, C. F., & Soehne
Boehringer, C. H., Sohn
Hoffmann-La Roche, Ltd.
Howards & Sons, Ltd.
Macfarlan, J. F., & Co.
Merck, E.
Morson, T., & Son
Smith, T. & H., Ltd.
Zimmermann, C., & Co

AMMONIA AND ITS SALTS
Brown & Blackburn
Burt, Boulton & Haywood, Ltd.
Nichols Chemical Co., Ltd.
Scrubb & Co., Ltd.
White, A., & Sons

ANÆSTHETICS
Duncan, Flockhart & Co.
Macfarlan, J. F., & Co.
Smith, T. & H., Ltd.
Zimmermann, C., & Co.
(*See also* CHLOROFORM)

ANNATTO
Fullwood, R. J., & Bland

ANTIMONY AND ITS SALTS
May & Baker, Ltd.
White, A., & Sons

ANTI-RHEUMATIC RINGS
Burge, Warren & Ridgley, Ltd.

ARROWROOT
Evans, Gray & Hood
Harker, George, & Co., Ltd.

ARTIFICIAL LIMBS
Haywood, J. H.

BALLROOM FLOOR POLISH
Lofthouse & Saltmer
Woolleys, Ltd.

BATH GLOVES
Hovenden, R., & Sons, Ltd.
Sohntze, F., & Co.
Solport Bros.

BATHING CAPS
Hutchinson Co.
Maw, S., Son & Sons
Schutze, F., & Co.

BINOCULARS
Darton, F., & Co.
Raphaels, Ltd.

BOOKS AND MAGAZINES
Churchill, J. & A.
Ilford "Photo Manual."
Lewis, H. K.
Martindale's "Extra Phar."
"Prescriber, The"
Pitman, Sir I., & Sons, Ltd.
Squire's "Companion"

BISMUTH SALTS
Alliance Drug & Chem. Co.
Howards & Sons, Ltd.
May & Baker, Ltd.
Merck, E.
Morson, T., & Son
Reitmeyer & Co.
Tyrer, T., & Co., Ltd.
White, A., & Sons

BOTANIC DRUGGISTS.
Newhall & Mason
Potter & Clarke, Ltd.

BOTTLES
Barnett & Foster
Beatson & Co.
Boling, Brown & Co.
Breffit, E., & Co., Ltd.
Bush, H. W., & Co., Ltd.
Chemists' Co-operative Wholesale
Fecher, M. J.
Gaasch, J. B.
Isaacs, L., & Co.
Johnsen & Jorgensen, Ltd.
Kilner Bros., Ltd.
Lang, Jules, & Son
Maw, S., Son & Sons
May, Roberts & Co.
Poths, H., & Co.
Toogood, W., Ltd.
Youldon, E., Ltd.

BOXES
Ayrton, Saunders & Co., Ltd.
Breffit, E., & Co., Ltd.
Ford, Shapland & Co.
Harrison & Waide
May, Roberts & Co.
Robinson & Sons, Ltd.
Rogers & Co.
Stipendum Stopper Co.

BREAST RELIEVERS
Maw, S., Son & Sons

BROMINE AND BROMIDES
Howards & Sons, Ltd.
Merck, E.

BRUSHES
Bidwell, Bidwell & Co.
Fecher, M. J.
Hovenden, R., & Sons, Ltd.
Kent, G. B., & Sons, Ltd.
Maw, S., Son & Sons
May, Roberts & Co.
Nicholls, W. G., & Co.
Tilbury, W. R., & Co.

BUTTER COLOURING
Fullwood, R. J., & Bland
Oldfield, Pattinson & Co.

CACHETS
Christy, T., & Co.

CAMOMILES
Boehm, F., Ltd.
Salle, H., & Cie.

CAMPHOR
Alliance Drug & Chemical Co.
Chemists' Co-operative Wholesale
Howards & Sons, Ltd.
May & Baker, Ltd.

CAPSULES
Allen & Hanburys, Ltd.
Baiss Bros. & Stevenson, Ltd.
British Drug Houses, Ltd.
Davies, Sons & Co.
Denoual, J., & Co.
Duncan, Flockhart & Co.
Lloyd, T. Howard, & Co.
Mawson & Co.
Parke, Davis & Co.
Pill, Tablet, & Capsule Alliance
Tye, J., & Son
Wand Mfg. Co.
Wander, A.
Warrick Bros.
Woolley, J., Sons & Co.

CAPPING MATERIALS
Erhardt, H., & Co., Ltd.
Viscose Co., Ltd.

CAPS FOR BOTTLES, &c.
Darter, Wilkinson & Co.
Fecher, M. J.
Viscose Co., Ltd. (self-fixing)

CARTONS
Ford, Shapland & Co.
Harrison & Waide

CAPSULING MACHINE
Mehn, C.

CARAGHEEN MOSS
Holzmuller & Schmidt

CARBOLIC ACID
Burt, Boulton & Haywood, Ltd.
Calvert, F. C., & Co.
Chemists' Co-operative Wholesale
Hoffmann-La Roche, Ltd.
Hollingshurst & Co.
(*See also* DISINFECTANTS)

CARBOYS
Breffit, E., & Co., Ltd.

CASH TILLS
Gledhill, G. H., & Sons, Ltd.
National Cash Register Co., Ltd.
O'Brien, T.
Saxe Register Co., Ltd.

CASTOR OIL
Boehm, F., Ltd.
Hull Oil Mfg. Co., Ltd.
Premier Oil Extract. Mills, Ltd.

CAUSTIC SODA
Brunner, Mond & Co., Ltd.

CEMENTS
Kay Bros., Ltd.

CHALK, PRECIPITATED
Levermore, A., & Co.
Mumford, G. S., & Sons
Nichols Chemical Co., Ltd.
Sturge, John & E.

CHAMOIS
Cresswell Bros. & Schmitz
Internatl. Sponge Importers
Kent, G. B., & Sons, Ltd.
Solport Bros.

CHEMICAL MFRS.
Bayer Co., Ltd.
Boehringer, C. F., & Soehne
Bramwell, E., & Son
British Drug Houses, Ltd.
Brunner, Mond & Co., Ltd.
Burroughs Wellcome & Co.
Harrington Bros., Ltd.
Hoffmann-La Roche, Ltd.
Howards & Sons, Ltd.
Macfarlan, J. F., & Co.
May & Baker, Ltd.
Merck, E.
Morson, T., & Son
Reitmeyer & Co.
Schimmel & Co.
Smith, T. & H., Ltd.
Sthamer, Dr. Richard
Sturge, John & E.
Tyrer, T., & Co., Ltd.
Washington Chemical Co.
White, A., & Sons

CHEST PROTECTORS
Solport Bros.
Wood, Vincent

CHLORIDE OF LIME
Brunner, Mond & Co., Ltd.

CHLOROFORM
Duncan, Flockhart & Co.
Macfarlan, J. F., & Co.
May & Baker, Ltd.
Morson, T., & Son
Smith, T. & H., Ltd.

CIGARS AND CIGARETTES
Hovenden, R., & Sons, Ltd.
Singleton & Cole, Ltd

CITRIC ACID AND CITRATES
British Drug Houses, Ltd.
Howards & Sons, Ltd.
Morson, T., & Son
Sturge, John & E.

CLINICAL THERMOMETERS
Burge, Warren & Ridgley, Ltd.
Hicks, J. J.
Maw, S., Son & Sons
Newbery, F., & Sons, Ltd.
Perken, Son, & Co., Ltd.

CLOTH BALLS
O'Neil Zetts & Co.
Senier, A., & Co.

COAL TAR SPECIALITIES
Wright, Layman & Umney, Ltd.

COCOA
Cadbury Bros., Ltd.
Frame Food Co.
Oppenheimer, Son & Co., Ltd.

COD-LIVER OIL
Albrethson, A., & Co.
Allen & Hanburys, Ltd.
Alliance Drug & Chem. Co.
Baiss Bros. & Stevenson, Ltd.
British Drug Houses, Ltd.
Bush, H. W., & Co., Ltd.
Devold, Peder
Evans Sons Lescher & Webb, Ltd.
Goodall, Backhouse & Co.
Lloyd, T. Howard, & Co.
Oldfield, Pattinson & Co.
Southall Bros. & Barclay, Ltd.
Woolley, Jas., Sons & Co., Ltd.
Wright, Layman & Umney, Ltd.
Zimmermann, A. & M.
Zimmermann, C., & Co.

COLOURS, BEVERAGE, &c.
Boake (A.), Roberts & Co., Ltd.
Stevenson & Howell, Ltd.
(*See also* DAIRY ADJUNCTS)

COMBS
Hovenden, R., & Sons, Ltd.
Kent, G. B., & Sons, Ltd.
Maw, S., Son & Sons
May, Roberts & Co.
Newbery, F., & Sons, Ltd.
Sangers'

CORKS
Mitchell, N. W., & Sons, Ltd.

CORN CURE
Edwards, S.

CORN FILE
Lindsay, T. C., & Co., Ltd.

COUNTER ADJUNCTS
Evans Sons Lescher & Webb, Ltd.

COUNTER SPECIALITIES
Allen & Hanburys, Ltd.
British Drug Houses, Ltd.
Hewlett, C. J., & Son
Newbery, F., & Sons, Ltd.
Southall Bros. & Barclay, Ltd.
Woolleys, Ltd.

CREAM OF TARTAR
British Drug Houses, Ltd.

CREOSOTE
Baiss Bros. & Stevenson, Ltd.
Burt, Boulton & Haywood
Morson, T., & Son

CREPE BANDAGE
Gimber, W., & Son
Norwich Crêpe Co. (1856), Ltd.
Wood, Vincent

CYANIDES
May & Baker, Ltd.

DAIRY SPECIALITIES
Benger's Food, Ltd.
Fullwood, R. J., & Bland
Oldfield, Pattinson & Co.
Tomlinson & Hayward, Ltd.

DEMIJOHNS
Breffit, E., & Co., Ltd.

DENTAL MECHANICS
Chalk, George, & Co.
Fentiman, A. G.
Fentiman, A. J., & Co.
Halder, E. C.
Last & White.
Wardale & Co.

DENTIFRICES
Beecham, T.
Beiersdorf, P., & Co.
Bell, John, Hills & Lucas, Ltd.
Blackie, R.
Burroughs Wellcome & Co.
Calvert, F. C., & Co.
Christy, T., & Co.
Cook, E., & Co., Ltd.
Eucryl, Ltd.
Hall & Ruckel
Jewsbury & Brown
Lambert Pharmacal Co.
McKesson & Robbins
Maw, S., Son & Sons
Newbery, F., & Sons, Ltd.
Odol Chemical Works
Standard Tablet & Pill Co.
Woods, W., & Son
Woolley, J., Sons & Co., Ltd.

DIABETIC BREAD AND FOOD
Callard & Co.
Van Abbott, G., & Sons

DENTAL INSTRUMENTS
Hatrick, James L., & Co., Ltd.
DISINFECTANTS
Baiss Bros. & Stevenson, Ltd.
Burt, Boulton & Haywood, Ltd.
Calvert, F. C., & Co.
Condy & Mitchell, Ltd.
Cook, E., & Co., Ltd.
Dalmas, A. de St., & Co.
Edwards, W., & Son
Jeyes' Sanitary Compounds, Ltd.
Kay Bros., Ltd.
Lambert Pharmacal Co.
Roberts, Cornford & Co.
Sanitas Co., Ltd.
Tomlinson & Hayward, Ltd.
Willows, Francis B. & T.
Wright, Layman & Umney, Ltd.
Zimmermann, C., & Co.
DOSE REGULATORS
Reuter, R. J.
DIGESTIVE PRODUCTS
Armour & Co., Ltd.
Benger's Food, Ltd.
Fairchild Bros. & Foster
Parke, Davis & Co.
Squire & Sons
Zimmermann, C., & Co.
DRUGS, CRUDE
Holzmuller & Schmidt
Horner & Sons
Potter & Clarke, Ltd.
Ransom, W., & Son
Salle, H., & Cie.
Wilkinson & Simpson, Ltd.
DYES
Judson, D., & Son
Whitaker & Co.
EAU DE COLOGNE
Breidenbach & Co.
Farina, J. M.
Farina, J. M. (No. 4)
Fickus, Courtenay & Co.
McCracken, J. & R.
Schutze, F., & Co.
EDUCATIONAL INSTITUTIONS
Bath and West of England College of Pharmacy
Birmingham and Midland College of Pharmacy
British Optical Institute
Edinburgh Central School of Pharmacy
Glasgow School of Pharmacy
Leeds College of Pharmacy
Liverpool School of Pharmacy
London College of Pharmacy
Manchester College of Pharmacy
Muter's (So. Lond.) School of Pharmacy
North of England School of Pharmacy
North Stafford School of Pharmacy
Northern College of Pharmacy
Pharmaceutical Society's School of Pharmacy.
South of England College of Pharmacy
University of Birmingham
Westminster College of Pharmacy
EFFERVESCENT PREPS.
Allen & Hanburys, Ltd.
Bishop, Alfred, Ltd.
Blackie, R.
Bristol-Myers Co.
Cox, A. H., & Co., Ltd.
Evans Sons Lescher & Webb,Ltd
Goodall, Backhouse & Co.
Kutnow, S., & Co., Ltd.
Lloyd, T. Howard, & Co.
Lorimer & Co., Ltd.
Newball & Mason
Potter & Clarke
Standard Tablet & Pill Co.
Sturge, John & E.
Tidman & Son, Ltd.
Tyrer, T., & Co., Ltd.
Wright, Layman & Umney
EMERY AND CLOTH
Oakey, J., & Sons, Ltd.
ESSENCES, CONCRETE
Cresp-Martineng
Lautier Fils
Murray, O., & Co., Ltd.
Roure-Bertrand fils
Schmoller & Bompard
ETHERS
Baiss Bros. & Stevenson, Ltd.
Macfarlan, J. F., & Co.
May & Baker, Ltd.
Tyrer, T., & Co., Ltd.
White, A., & Sons
EUCALYPTUS OIL
British Drug Houses, Ltd.
Baiss Bros. & Stevenson, Ltd.
ELASTIC HOSIERY
Ayrton, Saunders & Co., Ltd.
Berliner, Arthur
Bnrge, Warren & Ridgley, Ltd.
Haywood, J. H.
Maw, S., Son & Sons
Wood, Vincent
EMULSIONS, COD-LIVER OIL, ETC.
Allen & Hanburys, Ltd.
Ayrton, Saunders & Co.
Baiss Bros. & Stevenson, Ltd.
Blackie, R.
British Drug Houses, Ltd.
Evans Sons Lescher & Webb,Ltd.
Faulding, F. H., & Co.
Harker, Stagg & Morgan, Ltd.
Lorimer & Co., Ltd.
Oldfield, Pattinson & Co.
Scott & Bowne, Ltd.
Parke, Davis & Co.
Woolley, Jas., Sons & Co.
Woolleys, Ltd.
ENEMAS
Bailey, W. H., & Son
Burge, Warren & Ridgley
Davol Rubber Co.
Hatrick, James L., & Co., Ltd.
Hay, J. B., & Co.
Ingram, J. G., & Son
Maw, S., Son & Sons
Toogood, W., Ltd.
Warne, W., & Co., Ltd.
EPSOM SALTS
Howards & Sons, Ltd.
ESSENCES, SOL. AND FRUIT
Alliance Drug & Chem. Co.
Baiss Bros. & Stevenson, Ltd.
Barnett & Foster
Boake (A.), Roberts & Co., Ltd.
Bush, W. J., & Co., Ltd.
Evans Sons Lescher & Webb
Hay, Wm., Ltd.
Lautier Fils
London Essence Co.
Lorimer & Co., Ltd.
Newball & Mason
Ronre-Bertrand fils
Spencer, J., Son & Co.
Stevenson & Howell, Ltd.
Zimmermann, A. & M.
EXTRACT OF HERBS
Newball & Mason
Potter & Clarke
EXTRACTS (MEDICINAL)
Allen, Stafford, & Sons, Ltd.
Chemists' Co-operative Wholesale
Hewlett, C. J., & Son
Parke, Davis & Co.
Ransom, W., & Son
(*See also* WHOLESALE DRUGGISTS)
FEEDING BOTTLES
Breffit, E., & Co., Ltd.
Fecher, M. J.
Hovenden, R., & Sons, Ltd.
Kilner Bros., Ltd.
Maw, S., Son & Sons
Sangers'
Sonthall Bros. & Barclay, Ltd.
FILTERS (WATER)
Berkefeld Filter Co., Ltd.
FLESH GLOVES
Sangers'
FLYCATCHERS
Alabastine Co. (British), Ltd.
Deansmere Manfg. Co.
Flykatcho
Ford, Shapland & Co.
Frowein, C.
Kay Bros., Ltd.
Smith, J. H., & Co.
Strong, Christy
Tunbridge & Wright
FORMALDEHYDE
Burt, Boulton & Haywood
FOODS, INFANTS'
Allen & Hanburys, Ltd.
Benger's Food, Ltd.
Frame Food Co., Ltd.
Lofthouse & Saltmer
Natural Food Co., Ltd.
Willows, Francis, B. & T.
FOODS, SPECIAL
Allen & Hanburys, Ltd.
Benger's Food, Ltd.
Brand & Co., Ltd.
Burt, C. J.
Callard & Co.
Fairchild Bros. & Foster
Frame Food Co., Ltd.
Garman Bros.
Menley & James, Ltd.
Natural Food Co., Ltd.
Wander, A.
FRUIT CRYSTALS
Aerators, Ltd.
FULLER'S EARTH
Mumford, G. S., & Sons
FUMIGATORS
Sanitas Co., Ltd.
GELATIN AND GLUE
Boehm, F., Ltd.
GLAUBER'S SALT
Bramwell, E., & Son
Howards & Sons, Ltd.
GLYCERIN
Boehm, F., Ltd.
Price's Patent Candle Co.
GLYCEROPHOSPHATES
Merck, E.
Pointet & Girard
GOLD PAINT
Judson, D., & Son
GRINDERS
Allen, Stafford, & Sons, Ltd.
Goodall, Backhouse & Co.
Willows, Francis B. & T.
HAIR WAVERS AND CURLERS
Merkham Trading Co., Ltd.
HAT DYES
Whitaker & Co.
HAIR PREPARATIONS
Capsuloids (1909), Ltd.
Chesebrough Manfg. Co.
Edwards' "Harlene" Co.
Harker, Stagg & Morgan
Herpicide Co.
John Strange Winter
Martiné & Co.
Robare's Aureoline
Rowland, A., & Sons
Woolleys, Ltd.
HAT RENOVATORS
Christy, T., & Co.
HEATING FLASKS
Gutmann, A. E., & Co.
HERBS
Potter & Clarke
HOMŒOPATHIC MEDICINES
Ashton & Parsons, Ltd.
Keene & Ashwell, Ltd.
Leath & Ross
HOTELS
Esmond Hotel
Kingsley Hotel
Thackeray Hotel
HOT-WATER BOTTLES
Berliner, Arthur
Burge, Warren & Ridgley
Hutchinson Co.
Maw, S., Son & Sons
May, Roberts & Co.
Southall Bros. & Barclay
Wood, Vincent
HYDROGEN PEROXIDE
May & Baker, Ltd.
Sanitas Co., Ltd.
Tyrer, T., & Co., Ltd.
HYPOPHOSPHITES
May & Baker, Ltd.
Merck, E.
Tyrer, T., & Co., Ltd.
INHALERS
Christy, T., & Co.
Fecher, M. J.
Sangers'
INK
Bewley & Draper, Ltd.
Hickisson, A. B.
INSECTICIDES
Christy, Thos., & Co.
Corry & Co., Ltd.
Smith, B. A., & Co.
Tomlinson & Hayward, Ltd.
Voss, Walter, & Co.
White, E. A., Ltd.
Woolleys, Ltd.
INSECT POWDER
Boehm, F., Ltd.
Smith, B. A., & Co.
IODINE AND IODIDES
Howards & Sons, Ltd.
Merck, E.
Morson, T., & Son
ITROSYL
Fletcher, Fletcher & Co.
JARS AND POTS
Boling, Brown & Co.
Breffit, E., & Co., Ltd.
Bush, H. W., & Co., Ltd.
Cook, A., & Co.
Johnsen & Jorgensen, Ltd.
Kilner Bros., Ltd.
Lang, Jules, & Son
Maw, S., Son & Sons
Poths, H., & Co.
Reuter, R. J.
Stipendum Stopper Co.
Toogood, W., Ltd.
LACTIC FERMENTS
Allen & Hanburys, Ltd.
Cox, Arthur H., & Co., Ltd.
Davies, Sons, & Co.
Martindale, W.
Parke, Davis & Co.
Wilcox, Jozeau & Co.
LAMPS, DISINFECTING
Roberts, Cornford & Co.
LANOLINE
Burroughs Wellcome & Co.
Christy, T., & Co.
Sangers'
LARD
Chemists' Co-operative Wholesale
Ewen, J., & Sons
LIME JUICE AND CORDIAL
Evans Sons Lescher & Webb
Goodall, Backhouse & Co.
Idris & Co., Ltd.
LINSEED, CRUSHED, ETC.
Allen, Stafford, & Sons
Mumford, G. S., & Sons
LINTS
Vernon & Co., Ltd.
LIQUORICE JUICE
Boehm, F., Ltd.
British Drug Houses, Ltd.
Evans, Gray & Hood
Evans Sons Lescher & Webb,Ltd.
Horner & Sons
Jackson, E. E.
Mumford, G. S., & Sons
LIQUORS, CONC., ETC.
Allen, Stafford, & Sons, Ltd.
Fletcher, Fletcher & Co.
Hewlett, C. J., & Son
Robinson, B., & Co.
LITHIA SALTS
British Drug Houses, Ltd.
May & Baker, Ltd.
Merck, E.
LOOFAHS
Cresswell Bros. & Schmitz
LOZENGES
Allen & Hanburys, Ltd.
Cox, A. H., & Co., Ltd.
Denoual, J., & Co.
Jackson, E. E.
Meggeson & Co., Ltd.
Potter & Clarke
Raimes & Co.
Warrick Bros.
MACHINERY, PHARMACAL
Allen & Hanburys, Ltd.
Bennett, E., & Son, Ltd.
Bennett, Sons & Shears, Ltd.
Fecher, M. J.
Gardner, Wm., & Sons, Ltd.
Pindar, J. W., & Co.
Smith, B. A., & Co.
Stokes, F. J., Machine Co.
Thompson & Capper (Stokes)
Wilkinson, S. W., & Co.
MAGNESIA AND ITS SALTS
Henry, T. & W.
Howards & Sons, Ltd.
May & Baker, Ltd.
Washington Chemical Co.
MAILING CASES
May, Roberts & Co.
MALT EXTRACT AND PREPS.
Allen & Hanburys, Ltd.
Baiss Bros. & Stevenson, Ltd.
Blackie, R.
British DiaMalt Co.
Burroughs Wellcome & Co.
Evans Sons Lescher & Webb
Hewlett, C. J., & Son
Lorimer & Co., Ltd.
Oppenheimer, Son & Co., Ltd.
Paine & Co., Ltd.
Southall Bros. & Barclay, Ltd.
Squire & Sons
Woolley, Jas., Sons & Co., Ltd.
Wright, Layman & Umney
MARKING INK
Hickisson, A. (Bond's)
MEASURES
Bush, H. W., & Co., Ltd.
MEAT EXTRACTS
Armour & Co., Ltd.
Brand & Co., Ltd.
Buvo, Ltd.
MEDICINE CHESTS
Burroughs Wellcome & Co.
Keene & Ashwell, Ltd.
Leath & Ross
Lloyd, T. Howard, & Co.
Parke, Davis & Co.
MERCURIALS
Howards & Sons, Ltd.
May & Baker, Ltd.
Merck, E.
Tyrer, T., & Co., Ltd.
METEOROLOGICAL SETS
Darton, F., & Co.
METHYLATED SPIRIT
Burrough, J., Ltd.
Preston's Liverpool Distillery
Randall & Son, Ltd.
MILK APPARATUS
Zimmermann, C., & Co.
MILK BYPRODUCTS
Casein, Ltd.

MENTHOL CONES
Bush, H. W., & Co., Ltd.
Maw, S., Son & Sons
MINERAL WATERS AND SALTS
Apollinaris Co., Ltd.
British Drug Houses, Ltd.
Hughes, E. Griffiths
Ingram & Royle, Ltd.
Vichy (State Springs)
MOTOR GOGGLES
Darton, F., & Co.
MUSK, ARTIFICIAL
Mallmann, W.
NAPHTHAS
Burt, Boulton & Haywood
NURSES' WALLETS
Hatrick, James L., & Co., Ltd.
OILS, ESSENTIAL
Allen, Stafford, & Sons, Ltd.
Alliance Drug & Chem. Co.
Baiss Bros. & Stevenson
Boake (A.), Roberts & Co., Ltd.
Bush, W. J., & Co., Ltd.
Chiris, Antoine
Cresp-Martinenq
Evans Sons Lescher & Webb, Ltd.
Holzmuller & Schmidt
Horner & Sons
Lautier Fils
Lhermine & Cie.
London Essence Co.
Matthew, Jesse
Mühlethaler, Th., Ltd.
Pasquale, S. F. de, & Fratelli
Poppelreuter, W.
Ransom, W., & Son
Roure-Bertrand fils
Sachsse, E., & Co.
Schimmel & Co.
Schmoller & Bompard
Spencer, J., Son & Co.
Stevenson & Howell, Ltd.
Todd, A. M., Co.
Wright, Layman & Umney
Zimmermann, A. & M.
OILS, FATTY, ETC.
Allen, Stafford, & Sons, Ltd.
Price's Patent Candle Co.
Smith, B. A., & Co.
OINTMENTS
Blackie, R.
Chemists' Co-operative Wholesale
Oldfield, Pattinson & Co.
OPTICAL INSTRUCTION
British Optical Institute

OILS, MINERAL
Price's Patent Candle Co.
Wright, Layman & Umney
OPTICAL GOODS
Botwright & Grey
Darton, F., & Co.
Maw, S., Son & Sons
Newbery, F., & Sons, Ltd.
Nitsche & Günther
Raphael's, Ltd.
OTTO OF ROSE
Bontcheff & Kidoff
Pappazoglou, D.
Reitmeyer & Co. (synthetic)
Seraphimoff, S., & Co.
Shipkoff & Co.
OXYGEN GENERATORS
Oppenheimer, Sons & Co.
PACKED GOODS
(*See* WHOLESALE)
PALATINOIDS
Oppenheimer, Son & Co
PASTILLES
Allen & Hanburys, Ltd.
Asche, C. F., & Co.
Baiss Bros. & Stevenson
Burroughs Wellcome & Co.
Denoual, J., & Co.
Evans Sons Lescher & Webb
Meggeson & Co., Ltd.
Warrick Bros.
PERFUMES
Allen & Hanburys, Ltd.
Barclay & Sons, Ltd.
Breidenbach & Co.
Bronnley, H., & Co., Ltd.
Bush, W. J., & Co., Ltd.
Christy, T., & Co.
Chuit, Naef & Co.
Erasmic Co., Ltd.
Evans Sons Lescher & Webb, Ltd.
Hewlett, C. J., & Son
Hovenden, R., & Sons, Ltd.
John Strange Winter.
Lescol Perfumery Co.
McCracken, J. & R.
Maw, S., Son & Sons
Newbery, F., & Sons, Ltd.
Quelch, H. C., & Co.
Reuter, R. J.
Southall Bros. & Barclay
Spencer, J., Son & Co.
To-Kalon Mfg. Co.
Warrick Bros.
West, T.
Yardley & Co., Ltd.

PATENT AGENT
Barker, R. W.
PERFUME MATERIALS
Bush, W. J., & Co., Ltd.
Chiris, Antoine
Compagnie Morana
Cresp-Martinenq
Flora Chemical Works, Ltd.
Lautier Fils
Mallmann, W.
Mühlethaler, Th., Ltd.
Murray, O., & Co., Ltd.
Schimmel & Co.
Shipkoff & Co.
Spencer, J., Son & Co.
Treatt, R. C., & Co.
Zimmermann, C., & Co.
PESSARIES
Burge, Warren & Ridgley
Rendell, W. J.
PETROLEUM EMULSION
British Drug Houses, Ltd.
PETROLEUM JELLY
Chesebrough Mfg. Co.
PHOTO. CHEMICALS
Boehringer, C. F., & Soehne
Burroughs Wellcome & Co.
Lockyer, J. E.
Merck, E.
PHOTO. ENLARGERS, PRINTERS, &c.
Express Developing Co.
Halifax Photographic Co.
PILL MAKERS
Allen & Hanburys, Ltd.
Asche, C. F., & Co.
Bishop, Alfred, Ltd.
British Drug Houses, Ltd.
Cox, A. H., & Co., Ltd.
Davies, Sons & Co.
Evans Sons Lescher & Webb, Ltd.
Hewlett, C. J., & Son
Howards & Sons, Ltd.
Lloyd, T. Howard, & Co.
McKesson & Robbins
Parke, Davis & Co.
Pill, Tablet, & Capsule Alliance
Southall Bros. & Barclay
Standard Tablet & Pill Co.
Wand Mfg. Co.
Warner, W. R., & Co.
Woolley, J., Sons & Co., Ltd.
POLISHES (VARIOUS)
Bradley & Bourdas
Judson, Daniel, & Son
Oakey, J., & Son, Ltd.

PHOTO. GOODS
Barclay & Sons, Ltd.
Darton, F., & Co.
Evans Sons Lescher & Webb
Halifax Photographic Co.
Ilford, Ltd.
Lennon, Ltd.
May, Roberts & Co.
Murdoch, John, & Co.
Newbery, F., & Sons, Ltd.
PLASTERS
Allcock Mnfg. Co.
Berliner, Arthur
Beiersdorf, P., & Co.
Dalmas, A. de St., & Co.
Leslies, Ltd.
Maw, S., Son & Sons
Solport Bros.
POSTERS
Ford, Shapland & Co.
PRINTERS
Dudley & Co.
Ford, Shapland & Co.
Harrison & Waide
Smith, W. H., & Son
Townsend, J., & Sons
PROPRIETARY ARTICLES
American Drug Stores
Anglo-American Drug Co.
Ashton & Parsons, Ltd.
Atkinson & Barker
Barclay & Sons, Ltd.
Battle, Son & Maltby
Beecham, T.
Beiersdorf, P., & Co.
Box, W. H.
British Drug Houses, Ltd.
Capsuloids (1909), Ltd.
Christy, T., & Co.
Coleman & Co., Ltd.
Congreve, G. T.
Cox, A. H., & Co., Ltd.
Curry, Henry
Daggett & Ramsdell
Daisy, Ltd.
Davenport, J. T., Ltd.
Day & Sons (Crewe), Ltd.
Day, Son & Hewitt
Denoual, J., & Co.
Edwards, W., & Son
Elliman, Sons & Co.
Evans Sons Lescher & Webb
Faulding, F. H., & Co.
Fellows' Syrup
Fennings, Alfred
Ferris & Co.

OLDFIELD, PATTINSON & Co.

TELEGRAMS:
"OPIUM, MANCHESTER."

A RELIABLE HOUSE FOR
All Pharmaceutical Preparations.
CONCENTRATED WATERS.
CONCENTRATED INFUSIONS.

Syr. Hypophosphites Co. (NEWTON)
ELIXIR TERPINI ET HEROIN COMP.
THYMOLYPTOL.

Syr. Glycerophosph. Co.
LIQUID EXTRACTS.
LEVIGATED OINTMENTS.
ESSENTIAL OILS.

"Silver Churn" Dairy Specialities.

Special Prices to Large Buyers. Write for List. See page 13.

MANCHESTER.

PROP. ARTICLES *(continued)*—
Fulford, C. E., Ltd.
Goodall, Backhouse & Co.
Grapelax, Ltd.
Guy's Tonic Co.
Henry, T. & W.
Hovenden, R., & Sons, Ltd.
Hughes, E. Griffiths
Icbtbyol Co.
International Cbemical Co.
Iron-Ox Rem. Co., Ltd.
Kay Bros., Ltd.
Kutnow, S., & Co., Ltd.
Lalor's, Dr., Phosphodyne
Lambert Pharmacal Co.
Loftbouse & Saltmer
Lorimer & Co., Ltd.
May, Roberts & Co.
Menley & James, Ltd.
Newbery, F., & Sons, Ltd.
Odol Chemical Works
Owbridge, W. T., Ltd.
Pedezy Co.
Powell, Thomas, Ltd.
Resinol Chemical Co.
Riebards, J. M., & Sons
Rubwel Co.
Sangers'
Savaresse's Capsules (Evans)
Schimmel & Co.
Scott & Bowne, Ltd.
Squire & Sons
Standard Tablet & Pill Co.
Stedman's Teething Powders
Tbompson & Capper
To-Kalon Mfg. Co.
Tunbridge & Wright
Wilcox, Jozeau & Co.
Zotos, Ltd.
(*See also* Dentifrices and Toilet Articles)

PLASTIC MODELS
Plastic Advertisement Co.

PULVELLÆ
Warrick Bros.

PULVERETTES
Oppenheimer, Son & Co., Ltd.

PUMPS
Berkefeld Filter Co., Ltd.

QUININE AND SALTS
Boehringer, C. F., & Soehne
Howards & Sons, Ltd.
Pointet & Girard.

RAPE OILS
Hull Oil Mnfg. Co.

RAZORS
Auto-Strop Safety Razor Co.
Gillette Safety Razor, Ltd.
Hovenden, R., & Sons, Ltd.

RENNET
Fullwood, R. J., & Bland
Oldfield, Pattinson & Co.

RESINS AND RESINOIDS
Allen, S., & Sons, Ltd.
Allen & Hanburys, Ltd.
Morson, T., & Son
Ransom, W., & Son
Smith, T. & H., Ltd.

RESPIRATORS
Zimmer & Co

RUBBER GOODS
Davol Rubber Co
Burge, Warren & Ridgley, Ltd
Evans Sons Lescher & Webb,Ltd
Fecher, M. J.
Galen Mfg. Co.
Hatrick, James L., & Co., Ltd.
Haywood, J. H.
Hovenden, R., & Sons, Ltd.
Hutchinson Co.
Maw, S., Son & Sons
May, Roberts & Co
Wanklyn, H. A.
Warne, W., & Co., Ltd.

SACCHARIN
Saccharin Corporation, Ltd.

SALICIN
Macfarlan, J. F., & Co.
Smith, T. & H., Ltd.

SALICYLATES
Bayer Co., Ltd.

SAMPLE CASES
Keane, Thomas

SANTONIN
Smith, B. A., & Co.

SAPONIN
Field, C. W.
Sthamer, Dr. R.

SAUCES
Goodall, Backhouse & Co.

SCALE PREPARATIONS
Morson, T., & Son

SEA SALT
Tidman & Son, Ltd.

SEA-SICKNESS REMEDY
Zotos, Ltd.

SELTZOGENES
Aerators, Ltd.

SERUMS AND ANTITOXINS
Allen & Hanburys, Ltd.
Evans Sons Lescher & Webb
Parke, Davis & Co.
Schimmel & Co.
Wilcox, Jozeau & Co.

SHEEP-DIPS
Burt, Boulton & Haywood
Sanitas Co., Ltd.
Tomlinson & Hayward, Ltd.

SHOP-FITTING
Ayrton-Graham, Ltd.
Bowling & Son
Evans Sons Lescher & Webb,Ltd.
Josephs, P., & Son
Maw, S., Son & Sons
Mills, H.
Parnall & Sons, Ltd.
Rudduck & Co.
Sangers'
Southall Bros. & Barclay, Ltd.

SHARES
McAdam & Tuckniss

SOAP MATERIALS
Chiris, Antoine
Flora Chemical Works, Ltd.

SOAPS
Allen & Hanburys, Ltd.
Armour & Co., Ltd.
Breidenbach & Co.
Bronnley, H., & Co., Ltd.
Chesebrough Mfg. Co.
Cook, E., & Co., Ltd.
Erasmic Co., Ltd.
Hull Oil Mfg. Co., Ltd.
Lescol Perfumery Co.
Oakey, J., & Son, Ltd.
Pears, A. & F., Ltd.
Price's Patent Candle Co.
Richards, J. M., & Sons
Shaw, Henry & Co.
Wright, Layman & Umney
Yardley & Co., Ltd.

SOAPS, MEDICATED
Armour & Co., Ltd.
Bronnley, H., & Co., Ltd.
Calvert, F. C., & Co.
Faulding, F. H., & Co.
Lambert Pharmacal Co.
Wright, Layman & Umney

SODA FOUNTAINS
British Automatic Aerators, Ltd.

SODIUM BICARBONATE
Brunner, Mond & Co., Ltd.
Howards & Sons, Ltd.
Mumford, G. S.

SOYA OIL
Hull Oil Mnfg. Co.

SPARKLETS
Aerators, Ltd.

SPECTACLES
Botwright & Grey
Darton, F., & Co.
Maw, S., Son & Sons
Nitsche & Güntber
Raphael's, Ltd.

SPHYGMOMETERS
Hicks, J. J.

SPIRIT OF WINE
Burrough, J., Ltd.
Preston's Liverpool Distillery

SPITTING-FLASKS
Maw, S., Son & Sons

SPONGE BAGS
Maw, S., Son & Sons
Schutze, F., & Co.
Toogood, W., Ltd.

SPONGE STANDS
Wanklyn, H. A.

SPONGES
Cresswell Bros. & Schmitz
Interntl. Sponge Importers
Kent, G. B., & Sons, Ltd.
Maw, S., Son & Sons
Sangers'

SPONGES, RUBBER
Wanklyn, H. A.

SPONGIO-PILINE
Whitehead, R. R., & Bros.

SPRAYERS
Corry & Co., Ltd.
White, E. A., Ltd.

SPRAYS
Burge, Warren & Ridgley, Ltd
Cook, Alfred, & Co.
Davol Rubber Co.
Hovenden, R., & Sons, Ltd.
Maw, S., Son & Sons
May, Roberts & Co.
Newbery, F., & Sons, Ltd.
Parke, Davis & Co.

STARCH
Mumford, G. S., & Sons

STILLS, ESSENTIAL OIL
Bennett, Sons, & Shears, Ltd.

STOPPERS
Fletcher, Fletcher & Co.
Stipendum Stopper Co.

STOVES (HEATING)
Clark, S., & Co.

SUPPOSITORIES
Cox, Arthur H., & Co.

SURGICAL APPLIANCES
Allen & Hanburys, Ltd.
Bailey, W. H., & Son
Burroughs Wellcome & Co
Hatrick, James L., & Co., Ltd.
Maw, S., Son & Sons
Quelch, H. C., & Co.
Wood, Vincent
Warne, W., & Co., Ltd.

SYNTHETIC PERFUMES
Boehringer, C. F., & Soehne
Busb, W. J., & Co., Ltd.
Chuit, Naef & Co.
Compagnie Morana
Flora Chemical Works, Ltd.
Murray, O., & Co., Ltd.
Reitmeyer & Co.

SURGICAL DRESSINGS
Beiersdorf, P., & Co.
Berliner, Arthur
Burroughs Wellcome & Co.
Dalmas, A. de St., & Co.
Galen Mfg. Co., Ltd.
Gimber, W., & Son
Hatrick, James L., & Co., Ltd.
Haynes, G., & Co.
Leshes, Ltd.
Liverpool Lint Co
Macfarlan, J. F., & Co.
Maw, S., Son & Sons
Newsome, C.
Robinson & Sons, Ltd
Soutball Bros. & Barclay
Stuart Plaster Pad Co.
Vernon & Co., Ltd.
Wood, Vincent
Woolley, J., Sons & Co., Ltd.
Wright, Turner & Son, Ltd.

SWIMMING FLOATS
Schutze, F., & Co.

SYNTHETIC REMEDIES
Bayer Co., Ltd.
Boehringer, C. F., & Soehne
Boehringer, C. H., Sohn
Hoffmann-La Roche, Ltd.
Reitmeyer & Co.

SYPHONS, S. W.
Aerators, Ltd.
Barnett & Foster
Breffit, E., & Co., Ltd.
Camwal, Ltd.
Idris & Co., Ltd

SYRUPS, MEDICINAL
Chemists' Co-operative Wholesale
Fellows' Med. Mfg. Co.
Fletcher, Fletcher & Co.
Squire & Sons

TABLETS, COMPRESSED
Allen & Hanburys, Ltd.
Asche, C. F., & Co.
Bishop, Alfred, Ltd.
British Drug Houses, Ltd.
Cox, A. H., & Co., Ltd.
Davies, Sons & Co.
Duncan, Flockhart & Co.
Evans Sons Lescher & Webb
Howards & Sons, Ltd.
Jackson, E. E.
Lloyd, T. Howard, & Co.
McKesson & Robbins
Parke, Davis & Co.
Pill, Tablet, & Capsule Alliance
Potter & Clarke
Standard Tablet & Pill Co.
Thompson & Capper
Wand Manufacturing Co.
Warner, W. R. (Newbery)

TABLOID PRODUCTS
Burroughs Wellcome & Co.

TARTARIC ACID
British Drug Houses, Ltd.
Boehringer, C. H., Sohn

TELEPHONE CAPS
Jeyes' Sanitary Compounds Co., Ltd.

TELESCOPES
Darton, F., & Co.

TINFOILS
Erhardt, H. & Co., Ltd.

TIN BOX MAKERS
Goodall, Backhouse & Co.
Huntley, Boorne & Stevens

TOBACCO
Singleton & Cole, Ltd.

TOFFEE
Meggeson & Co., Ltd.

TOILET PAPER
Ford, Shaplands & Co.
Newbery, F., & Sons, Ltd.
Townsend, J., & Sons

TUBES, COLLAPSIBLE
Lumley, L., & Co., Ltd.

TUBES, PAPER
Evenden's Pure Extracts, Ltd.

TOILET ARTICLES
Allen & Hanburys, Ltd.
Armour & Co., Ltd.
Auto-Strop Safety Razor Co.
Beetham, M., & Son
Berliner, Arthur
Blackie, R.
Breidenbach & Co.
Bronnley, H., & Co., Ltd.
Burroughs Wellcome & Co.
Chesebrough Mfg. Co.
Christy, T., & Co.
Cook, E., & Co., Ltd.
Daggett & Ramsdell
Daisy, Ltd.
Edwards' Harlene Co.
Erasmic Co., Ltd.
Eucryl, Ltd.
Hall & Ruckel
Harker, Stagg & Morgan
Hovenden, R., & Sons, Ltd.
John Strange Winter
Lloyd, A., & Co.
Lloyd, A. S. (Hovenden)
Lorimer & Co., Ltd.
Newbery, F., & Sons, Ltd.
Odol Chemical Works
Papier Poudré, Ltd.
Pharmazeutische - Industrie Gesellschaft (Offenbach).
Quelch, H. C., & Co.
Reuter, R. J.
Richards, J. M., & Sons, Ltd.
Rowland, A., & Sons
Sangers'
Sanitas Co., Ltd.
Shaw, Henry & Co.
Standard Tablet & Pill Co.
To-Kalon Mnfg. Co.
Toogood, W., Ltd.
Velvix Toilet Co.
Woolley, J., Sons & Co., Ltd.

TOOTH STOPPING
Stevens, P. A.

TRADE-MARKS AGENTS
Barker, R. W.
Ford, Shapland & Co.

TRUSSES
Bailey, W. H. & Son
Haywood, J. H.
Wood, Vincent
Woolley, J., Sons & Co., Ltd.

TUBED SPECIALITIES
Christy, T., & Co.
Sangers'

TURNED WOOD BOTTLES AND BOXES
May, Roberts & Co.

VACCINES
Allen & Hanburys, Ltd.
Evans Sons Lescher & Webb

VALUE
Alexander, H. P.
Baker, P. C.
Berdoe & Fish
Brett & Co.
Orridge & Co.
Tomlinson, T., & Son

VASELINE
Chesebrough Mfg. Co.

VERMIN-KILLERS
Battle, Son & Maltby
Danysz Virus, Ltd.
Evans Sons Lescher & Webb,Ltd.
Harker, Stagg & Morgan
Kay Bros., Ltd.
Sanford & Son

VETERINARY MEDICINES
Chesebrough Mfg. Co.
Day & Sons (Crewe), Ltd.
Day, Son & Hewitt
Edwards, W., & Son
Elliman, Sons & Co.
Harvey & Co., Ltd.
John, H. C.
Lloyd, T. H., & Co.
Tomlinson & Hayward, Ltd.
Walker, Troke & Co.
Wand Mfg. Co.
Wilson Vet. Mnfg. Co.
Young, W. F.

WATERS, CONCENTRATED
Chemists' Co-operative Wholesale
Robinson, B., & Co., Ltd.

WEED-KILLERS
Burt, Boulton & Haywood
Tomlinson & Hayward

WINES
Burrough, J., Ltd.
Millar, A., & Co., Ltd.
Robinson, B., & Co., Ltd.

WINES, MEDICATED
Burrough, J., Ltd.
Coleman & Co., Ltd.
Fletcher, Fletcher & Co., Ltd.

ZINC OXIDE
Baiss Bros. & Stevenson
Hebbuck, T., & Son, Ltd.

Telegraphic Address: "PHARMACY MANCHESTER"

James Woolley Sons & Co



DEPARTMENTS:

Drugs, Chemicals, and Pharmaceutical Products.
Surgical Instruments and Appliances, Trusses, etc.
Photographic Requisites, Chemical and Physical Apparatus.
Druggists' Sundries, Proprietary Articles, Stamped Medicines, etc.

WAREHOUSE, OFFICES & SHOW ROOMS: **VICTORIA BRIDGE.**

LABORATORIES & DRUG MILLS: **KNOWSLEY STREET.**

MANCHESTER.

PRICE LISTS AND ILLUSTRATED CATALOGUES FREE ON APPLICATION.

EXPORT ORDERS: Indents through British Shippers.

Telegraphic Address: "PHARMACY MANCHESTER"

James Woolley Sons & Co Ltd

SPECIALITIES.

BOROTHYMOL (Woolley).

Composed of Thymol, Eucalyptol and Menthol, with Boric and Benzoic Acids.

BROMOCHLORAL (Woolley).

A preparation containing Chloral Hydrate and Alkaline Bromides, with Extract Indian Hemp, Henbane, &c. Reliable Sedative and valuable Hypnotic.

CASCARA PURGANS. (Woolley.)

A concentrated, active and agreeable preparation of well-matured Cascara Sagrada, in which the bitter principle is covered by aromatics.

ELIXIR PALMETTO COMP. (Woolley).

A preparation of the fruit of Saw Palmetto (*Serenoa serrulata*) with English Sandal-wood Oil and aromatics. It is tonic, sedative, and diuretic in its properties.

ELIXIR TERPINI CO. (Woolley).

1 fluid drachm=1 grain of Terpin Hydrate and $\frac{1}{45}$ grain of Heroin Hydrochloride.

ELIXIR TERPINI CO. FORT. (Woolley.)

1 fluid drachm=2 grains of Terpin Hydrate and $\frac{1}{30}$ grain of Heroin Hydrochloride.

ELIXIR VIBURNI COMP. (Woolley).

A valuable uterine sedative and anodyne.

GLYCERIN. HEROIN CO. (Woolley).

1 fluid drachm=$\frac{1}{30}$ grain of Heroin Hydrochloride and 3 grains of Ammonium Hypophosphite, combined with Hyoscyamus, Tolu, Glycerin, and Aromatics.

LINCTUS CREOSOTI CO. (Woolley).

1 fluid drachm=$\frac{1}{8}$ grain of Codeina, 1 grain of Terpin Hydrate, 1 minim of Creosote, 5 grains of Sodium Formate, and Aromatics.

LINCTUS GUAIACOL COMP. (Woolley.)

1 fluid drachm=$\frac{1}{24}$ grain of Acetomorph. Hydrochlor., 1 grain of Terpin Hydrate, 1 minim of Guaiacol, 1 grain of Calcium Glycerophosphate, 1 grain of Sodium Glycerophosphate, and Aromatics.

LIQUOR SANTALI CO. (Woolley).

A combination of Yellow Sandal Wood Oil with Maranham Copaiba and fluid extracts of Cubeb and Buchu.

LIQUOR THYMOL ALKALINUS (Woolley.)

An Antiseptic Deodorising Solution, containing Thymol, Menthol, Eucalyptol, Sodium Benzoate, Borax, &c.

All the above in bottles containing 10, 20, 40, and 80 fluid ounces.

AKOLETHE (Woolley).

A solution of the sedative principles of Opium.

In bottles containing 4, 8, and 16 fluid ounces.

COD LIVER OIL EMULSION with GLYCEROPHOSPHATES (Woolley).

An Egg Emulsion of Cod Liver Oil, containing 7 grains of Glycerophosphates in each fluid ounce.

In bottles, retail at 2/- and 3/6.

MEDULLA-PHOSPHATES (Woolley).

Synonym:—Glycerin. Glycerophosph. c. Medulla Rubra.

A new Chemical Food, prepared from the Glycerophosphates of Calcium, Potassium, Sodium, Magnesium, Iron and Manganese, in combination with Glycerophosphoric Acid and Red Boue Marrow.

PEPTO-PANCREATIN (Woolley).

A valuable combination of digestive ferments in powder form. It consists of Pepsin, Pancreatin, Diastase, Hydrochloric and Lactic Acids, in Milk Sugar.

In 1, 2, 4, and 8 oz. bottles.

TABELLÆ PEPTO-PANCREATIN (Woolley).

In 1, 2, 4, and 8 oz. bottles.

TABELLÆ SODÆ PHENAT. CO. (Woolley).

Antiseptic and Astringent.

In ½ and 1lb. bottles.

TROCHISCI SODÆ PHENAT. CO. (Woolley).

Antiseptic and Astringent.

In ½ and 1lb. bottles.

PASTA ICHTHYOL CO. (Woolley).

Containing Ichthyol, Peta-Naphthol, Sulphur, Salicylic Acid, Resorcin, Zinc Oxide, &c.

In 1, 2, and 4 lb. tins.

PASTA THIOL ET ZINCI (Woolley).

Very useful in the treatment of *acne*, *erysipelas*, *pruritus*, *&c.*

1lb. and 2lb. sizes.

UNGUENTUM RESORCIN. CO. (Woolley).

Extensively used for various forms of *eczema*, and for *herpes*, *erysipelas*, *erythema*, *pruritus*, *&c.*

In 2oz. and 4oz. jars, and 1, 2, and 4 lb. tins.

UNGUENTUM SEDATIVUM (Woolley).

Containing Zinc Oxide and Carbolic Acid, and other ingredients of a soothing and emollient nature.

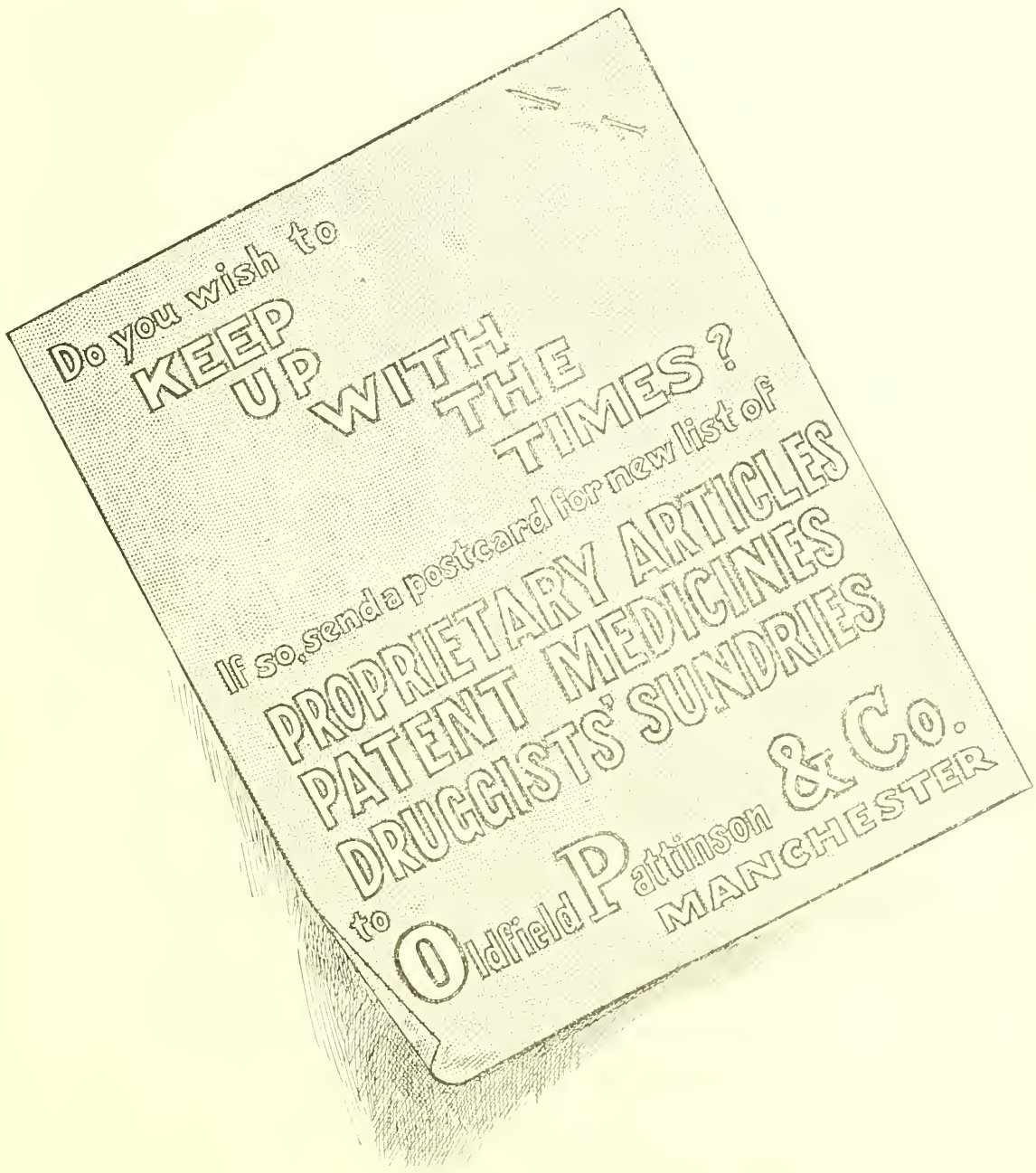
In 2oz. and 4oz. jars, and 1lb. and 2lb. tins.

MANCHESTER.

PRICE LISTS AND ILLUSTRATED CATALOGUES FREE ON APPLICATION.

EXPORT ORDERS: Indents through British Shippers.

Telegrams: "OPIUM MANCHESTER."



TELEPHONE: 984 CITY.

See page 9.

MASON'S
EFFECTIVE
POSTER

illustrated opposite is
printed in six colours
and measures approximately
five feet by three feet.
**It is calculated to
send business to chemists
all over the world.**

A COPY SENT POST PAID TO ANY CHEMIST WHO CAN FIND SPACE FOR IT.

Newball & Mason,
Nottingham.

Good!! it's

MAKE PRIME HERB BEER AT HOME FROM MASON'S EXTRACT OF HERBS

MILLIONS OF GLASSES DRUNK DAILY BY WORKERS ALL OVER THE EMPIRE



A 6D BOTTLE MAKES 8 GALLONS.

NEWBALL & MASON, NOTTINGHAM.

MASON'S

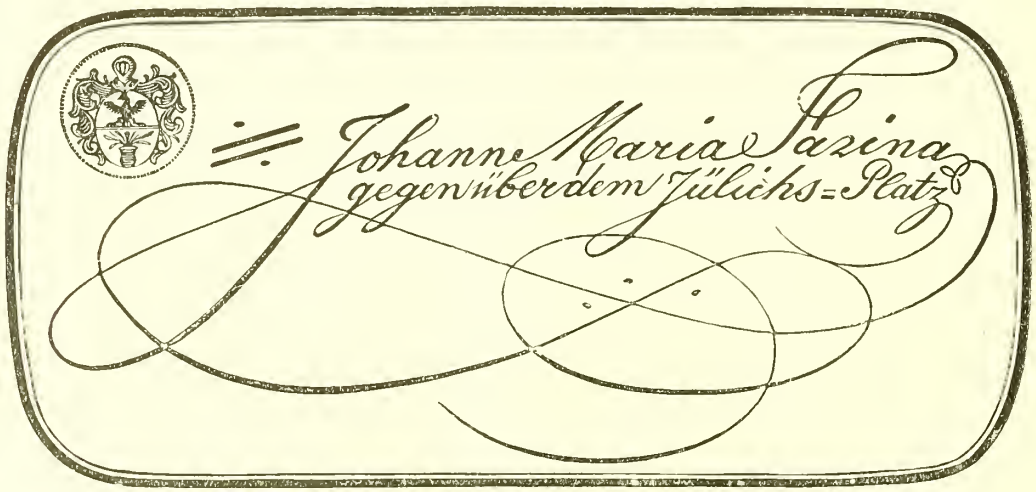
1709 200 YEARS 1909

JOHANN MARIA FARINA,

GEGENÜBER DEM JÜLICHS-PLATZ,

COLOGNE.

Established at Cologne A.D. 1709.



The above is an exact facsimile of my registered Label. Owing to the many close imitations of this, intending purchasers of Eau de Cologne should closely examine the label of every bottle, compare it with the one shown here, and note carefully **the address: Gegenüber dem Jülichs-Platz, in addition** to the name **Johann Maria Farina.**

I would point out that I am the manufacturer of the **"Genuine"** Eau de Cologne, and **the only Firm that has continuously and uninterruptedly** produced Eau de Cologne from the receipt of the inventor since 1709. During this time—**200 years**—the business has been carried on at the same address, viz.: **Gegenüber dem Jülichs-Platz,** by a direct descendant of the founder of my firm without a break.

These facts are sufficient to enable the public to properly value the incorrect statements put forward by various competitors and manufacturers of spurious imitations of my production.

(Signed) **JOHANN MARIA FARINA,**
Gegenüber dem Jülichs-Platz,
COLOGNE, Germany.

Sole Agents for Great Britain and Ireland—

Messrs. J. & R. McCRACKEN, 10 Bush Lane, Cannon St., LONDON, E.C.

Price Lists, Show Cards and Printed Matter on application.

BREIDENBACH'S · LATEST · SPECIALITIES



Nº 1651
FUMERIA



Nº 1649
TRYANIA



Nº 1652
ÂME DE VIOLETTE



Nº 1705
AYESHA



Nº 1662
ROSE D'ESPAGNE

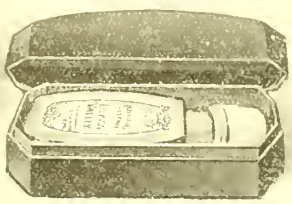


Nº 1650
LIMÔNYS



Nº 1622
THE WOOD VIOLET

ABSOLUTE ESSENCE WITHOUT SPIRIT
LILY OF THE VALLEY. CARNATION. ROSE.



Nº 1703 28/- Doz.



Nº 1663
MEI-BUTSU.

BREIDENBACH & Co.

HEAD OFFICE, 48, GREEK ST SOHO SQUARE, LONDON. W FACTORY, TOWER WORKS, CROYDON. SURREY.

Established 1793

Purity!

is

OUR POLICY.

It always has been and it always will be.

FOR HALF A CENTURY
and more we have been making

The Best Essential Oils

that it is possible to make and our products have received the highest commendation everywhere.

Almond Oil
(Expressed and Essential)
Cardamom Oil, Clove Oil, Coriander Oil,
English Dill Oil,
Lavender and Peppermint Oils,
Florentine Orris Root Oil,
and
Sandal Wood Oil.

ESTABLISHED in 1833

We are certain of this: that our oil will give you absolute satisfaction, not once, but EVERY TIME.

GOLD MEDAL St Louis 1904

Farms and Distilleries:
LONG MELFORD, SUFFOLK.
Wholesale and Export Trade only.

STAFFORD ALLEN & SONS LTD
Cowper St London E.C

T&H

Purity!

in

Pharmaceutical Extracts

is essential.

ALLEN'S

can always be relied upon.

EXT. Belladonnæ Viride Nov.

EXT. Hyoscyam. Viride Nov., &c.

prepared from the fresh herb grown on our own farms adjoining the works.

LIQUID EXTRACTS

Belladonna, Cascara, Ergot, Nux Vomica, &c.

English Medicinal Roots and Leaves.

RESINS

Jalap, Podophyllum, Scammony.

Ung. Hydrarg.

Ferri et Quininæ Cit.

&c., &c.

ESTABLISHED in 1833

GOLD MEDAL St LOUIS 1904

STAFFORD ALLEN & SONS LTD

Cowper St London. E.C

T&H

Schimmel & Co.'s Works

MILTITZ, near LEIPZIG.

THE following description of the works of Schimmel & Co., Miltitz, is abstracted from a booklet issued by the Company. It is believed that the drug trade will be interested in the particulars here given of the largest essential oil distillery in the world.

THE present offices and factory premises of Schimmel & Co. were erected at Miltitz in 1900, and in the following year the whole business was transferred without any serious interruption from Leipzig, where the firm had its headquarters ever since its foundation, in the year 1829, to the newly established works.

The site of the new premises, 5 miles distant from the centre of the city of Leipzig, adjoins the Thuringian Railway, with which it is connected by its own sidings, about 20 minutes' journey from Leipzig. It covers 62 acres of ground, and is divided into two parts of nearly equal size by the road leading from Klein-Miltitz to Lindennaundorf. On one of these parts the whole of the factory premises are situated, on the other, the office buildings with the post and telegraph office, and also in the midst of gardens the dwelling-houses of the staff of officials and workmen of the firm. On the other side of the railway, only the club house of the staff of the firm is situated.

The plot, which is crossed by roads, is provided with a drainage system, and gas and water supply; the sewage, i.e. the waste water from the factories and also the waste water and the sewage from the dwelling houses, is carried to distant irrigation fields, covering some 7 acres, and arranged according to the Berlin system.

The total area owned by the firm in Miltitz covers abont 300 acres.

A walk round affords the best view.

On leaving the station we pass the Imperial Post Office (fig. 1, foreground), belonging to the firm, where the letters, parcels, and telegrams are dealt with, and next arrive at the office block (fig. 1) which in its two main wings harbours the offices, stores, forwarding, and book and copperplate printing departments, and also the carpenter's hop where the packing cases are made.

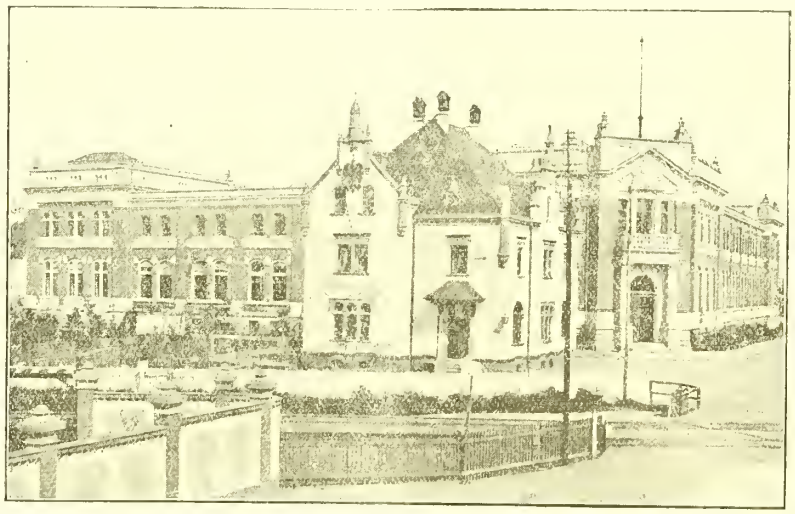


FIG. 1.

On the ground floor of the office block, on the left, are the general offices (fig. 2), 118 feet long, 56 feet wide, and 20 feet high, affording room for a staff of about 70. They are fitted up with all modern improvements, and may without exaggeration be called an ideal place for work.

Memorial tablets recall the high visits with which the firm was honoured: at Leipzig, in 1869, by King John of Saxony; in 1888, by King Albert and Queen Carola of Saxony; and at the Miltitz establishment on 16th February, 1905, by Frederick August, King of Saxony.

The right wing contains the principal forwarding department and the packing hall with adjoining rooms. Here the eye of the visitor meets an animated scene, for the goods manufactured in the various departments are here collected and prepared for despatch.

2,400 square yards of cellarage serve for storing the stock, the average value of which amounts to abont £100,000.

The ground floor further contains the Miltitz Custom-house which has been specially established for the firm, and is authorised to exercise the widest powers.

The printing department, situated on the first floor, keeps employed 2 printing machines, 2 lithographic presses, 1 copperplate press, and 12 auxiliary machines, whilst galvanic depositing baths for copper and steel are also provided. This plant is barely sufficient to meet the demand for printed matter, such as pricelists, circulars, pamphlets, etc. The whole of the necessary binding work is also done here.

The Lindennaundorf road separates the commercial department from the factory premises. On crossing the road, we arrive first of all at the gate-keeper's lodge with the mess room, cloak rooms for the workmen, and the doctor's consulting-room. The latter contains all that is necessary for cases of sudden illness, and particularly for first aid in accidents. The works' doctor has his consultation hours here three times weekly.

As we continue our way, we now come in succession to:

The boiler-house with its 14 boilers.*

The main factory (fig. 4) with the adjoining building serving chiefly for working up roses, mignonette, and orris.

The main building for the chemical processes (fig. 4).

The building for the chemical research work (fig. 5).

The buildings for the manufacture of inflammable products.

At the side, near the Schampert brook, are situated the workshops for the locksmiths, coppersmiths, and plumbers.

When the works were originally established, the sole aim was the production of the essential oils from plant material, and at the present time this still represents one of the main objects of the general work. But in addition to this, the firm already at an early date undertook purely chemical work in the domain of the artificial perfumes, and this has gradually developed into a wholesale manufacture of equal importance.

The Boilers, Engines, and Water Supply.

The plant, which supplies the works with steam for heating and power, consists of 14 double-flue boilers with an aggregate heating surface of 15,070 square feet. They are capable of transforming in the 12 hours' working day normally from 44,000 to 55,000 gallons of water into steam partly of 70, and partly of 140 lbs. pressure. The water required for this purpose is purified from the salts forming scale, by means of two Reichling's water-purifying apparatns, each of a capacity of 6,600 gallons per hour In the centre of the boiler-house the chimney-shaft rises 197 feet high, with a diameter of nearly 9 feet at the top. The boilers,

* A second boiler-house with 12 boilers and corresponding factory buildings has lately been opened, as the existing installation had reached the limits of its capacity.

SCHIMMEL & CO., Miltitz, near Leipzig, And 27 Mincing Lane, LONDON, E.C.

partly with stepped tubes and partly with Galloway tubes, are provided with step-grates for burning lignite; the coal store is above the firing floor. The coal trucks are run to the boiler-house with a fireless locomotive, and the coal is then dropped through a grate into a pit from which it is removed by a lift and deposited on a conveyer belt which dumps the coal into the bunkers. The coal is fed automatically to the grate by setting the lever in a suitable position. The generated steam is carried by a subterranean passage to the main factory building, from which a network of pipes branches off to all the other shops.

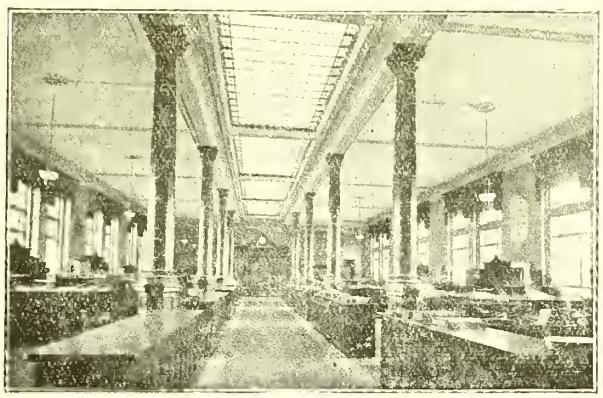


FIG. 2.

The steam is used chiefly for heating purposes, i.e. for distillation, and only a small proportion for generating power, for the disintegrators, lifts, cranes, agitators, for the air- and hydraulic pumps, etc.

Two horizontal Augsburg steam engines of 400 h.p. each supply the required power (fig. 3). Each of these is coupled direct to an alternating current generator of 180 kilowatts = 3 × 820 amperes at 220 volts. The electric current is transmitted to 70 motors ranging from 1¼ to 60 h.p. The premises are lighted by direct current dynamos, assisted by an accumulator battery.

The water consumption at the works is comparatively large, as much water is used for condensing the vapours. Two separate supplies serve this purpose, but each of them can be increased so much (if necessary) with the help of a cooling tower that it alone can meet the demand. The one consists of 30 tube wells yielding 15 gallons per second, or 650,000 gallons in 12 hours; the other has a yield of 13 gallons per second = 560,000 gallons of water in 12 hours. The normal demand of the factory is about 880,000 gallons daily. For the sake of comparison, it may be mentioned here that a town with 10,000 inhabitants consumes about 176,000 gallons in 24 hours, and that for the city of Leipzig, with its half-million inhabitants, 13,200,000 gallons is a high daily demand. The loft of the main factory building holds 6 water tanks of 8,800 gallons capacity each, whence a far-reaching network of pipes conducts the water into all the buildings, the dwelling-houses, and their gardens. In the yard of the works, and in the various roads of the whole establishment, 25 underground hydrants are provided for use in case of fire. For the rest, a volunteer fire brigade with fire-engines (hand and steam) and all necessary extinguishing apparatus, watches over the safety of the whole establishment.

Main Factory Building.

A view in the large distilling hall, which occupies practically the whole ground floor of the main factory building, shows the iron and copper distilling apparatus at work. From the second floor, where the raw material is stored—the roots, wood, bark, leaves, blossoms, fruit and seed, resins and balsams—this material is brought to the first floor in order to undergo the process of disintegrating, the necessary preparation for the distillation.

Here are to be found side by side numerous machines, rolling mill chairs, edge rollers, Excelsior mills, Boggardus mills, rasping machines, cutters, circular saws, stamps, which are working away from morning to night, filling the enormous space with their incessant turmoil. In the disintegrating process, the dispersal of the dust is prevented as much as possible in the interest of the health of the employees, by an arrangement of nets, or by enclosing the machines in dustproof casings. Large hoppers receive the prepared material, and allow it to run down into the stills placed underneath on the ground floor.

If in the disintegrating room the noise has been deafening, here we are met by the hissing, the roar, and the rush of the steam. Although in the process of distillation the escape of all oil vapours is carefully avoided, an aromatic odour pervades this room, which has a floor space of 3,000 square yards and is 26 feet high. Although the room has high windows, it is further ventilated by air under pressure for the purpose of purifying the air, and particularly with a view to cooling it during the summer.

The size and construction of the distilling apparatus, which are mostly built in the firm's own workshops, varies naturally very considerably, from the small testing apparatus of 100 cc. (about ⅕th of a pint) to the large still for camphor oil of 10,560 gallons capacity. Every possible distillation process is here taken into consideration and is also put into practice: evaporation without pressure, boiler steam of 70 and 140 lbs. pressure, wet steam and superheated steam, distillation at atmospheric pressure, at increased pressure, at reduced pressure of 100 mm. down to a vacuum of 5 to 2 mm.

The manufacture comprises the production of the volatile oils of the vegetable kingdom which are at all valuable from a technical point of view, or possess a scientific interest. Of the many hundred kinds of raw material which come under consideration, the principal ones, which are worked up in large quantities, are:

Ajowan seed	Guaiac wood
Angelica roots	Juniper berries
Anise-seed	Laurel leaves
Apricot kernels	Mignonette flowers
Bay leaves	Mustard seed
Calamus roots	Nutmegs
Caraway seed	Orris roots
Cedarwood	Patchouli herb
Chamomile blossoms	Peppermint herb
Cinnamon (Ceylon)	Pimento
Cloves and clove stems	Rose flowers
Coriander seed	Sage leaves
Cubebs	Sandalwood, East Indian
Fennel seed	Sandalwood, West Indian
Ginger roots	Savin tops.

The following example will explain the process by which the essential oil is obtained from the plant; it will also show how the work of distillation goes hand in hand with that of the chemical department.

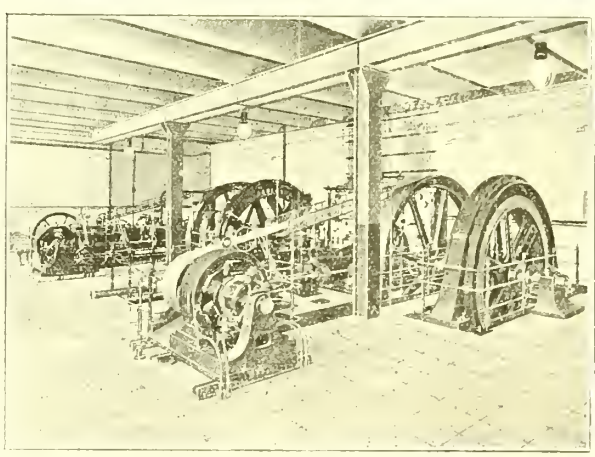


FIG. 3.

The ajowan-seed which reaches us from India—small grains having the appearance of anise and possessing a sharp aromatic odour, and a burning taste—is crushed between rolls, and allowed to run into the distilling apparatus placed below the rolls. Such a distilling apparatus, from ancient times also called "copper," represents an iron or copper cylinder about 6½ feet high by 5 feet wide, closed at top and bottom by curved plates. Above the bottom, a second plate, perforated like a sieve, is arranged as a false bottom, and on this is placed the distillation material which has been put into the cylinder through the manhole. A large pipe in the centre of the top plate connects the cavity of the still with the condenser. Below the false bottom, i.e. below the contents, steam is admitted from the boiler into the still, and, passing through the ajowan seed and filling all interstices, it

SCHIMMEL & CO., Miltitz, near Leipzig, And 27 Mincing Lane, LONDON, E.C.

mounts upwards, evaporating in its course the essential oil wherever it meets this. The mixture of steam and oil vapour rises from the contents of the cylinder, passes through the worm or bundles of pipes of the condenser, round which water flows, and is there condensed into a mixture of liquids. Now, as the essential oil dissolves but very little in water, it separates off from the latter, in the form of an oily film, in the receiver into which the distillate flows from the condenser. The distillation-water which still contains a small quantity of oil, partly in solution and partly suspended, is worked up further in a second still.

The work is so arranged, that in case of need oil can already be collected and delivered even before the truck which has brought

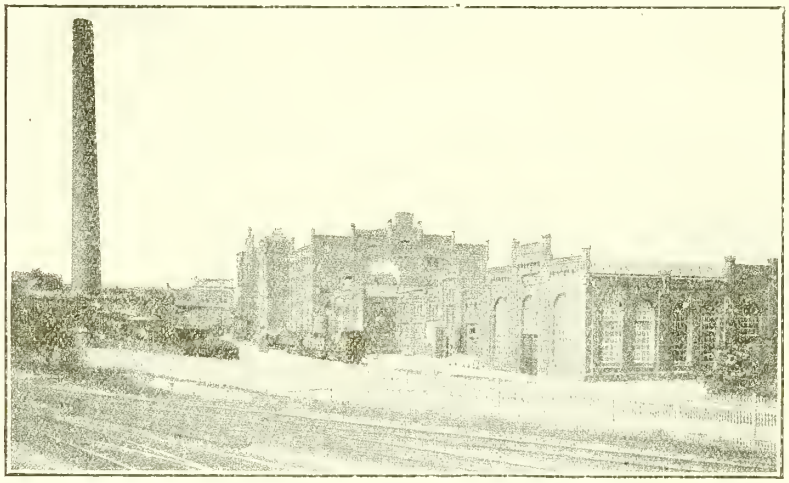


Fig. 4.

the raw material has been completely discharged. Ajowan seed, however, is somewhat more difficult to distil than other seeds, such as caraway, fennel, or anise. With the apparatus usually employed for the purpose 5 tons of ajowan seed are worked up daily, against 10 tons of caraway. But in special cases this quantity can be considerably increased by also making use of other apparatus.

The essential oils to which the parts of the plants in question owe their odour and aroma are usually mixtures of several chemical bodies, and consequently form with their large number a rich source of numerous valuable chemical bodies. Ajowan oil, for instance, consists for about half of thymol, and further contains cymene, pinene, and dipentene. The principal valuable constituent in the oil is thymol; as an antiseptic it may be compared with carbolic acid, but it has a more pleasant odour, not such caustic properties, and is more harmless. In the pure state it forms beautiful white crystals. In order to make a preliminary rough separation of the constituents of ajowan oil, advantage is taken of the difference in volatility, the thymol having the highest boiling point, whilst the other above-mentioned bodies boil much lower. If during the distillation of the oil the distillate is collected in separate fractions, a crude thymol is obtained, which is now taken to the chemical department, into the building for inflammable materials, where it is purified by repeated recrystallisation in a readily volatile and easily combustible solvent. So far this example.

The production of essential oils by the firm itself only represents a portion of the work. Very many oils are bought, their production being only possible on the spot from the fresh plant, such as eucalyptus, lavender, spike, rosemary, ylaug-ylang, cassia, cajuput, star-anise, and other oils, or because the expense of bringing the raw material to the works would render the cost price of the oils too high. Some of these oils are purified by rectification and then sold, i.e. they are only submitted to a refining process.

The importance of lavender oil has necessitated the establishment of a branch distillery (fig. 6) at Barrême (Basses-Alpes). Here the finest lavender oil is distilled under the superintendence of one of the firm's chemists who is an expert in this branch of the essential oil industry.

Chemical Department.

In the processes hitherto described, the essential oils are abstracted from the raw material, and the products thus obtained, or those purchased abroad, are further purified; in the chemical department the manufacture is chiefly carried on in these three directions:

1. Some particularly valuable constituents are isolated from the essential oils, and produced in the pure state;
2. Chemical compounds of these constituents, which are employed in the perfumery trade, the manufacture of liqueurs, or for medicinal purposes, are obtained by means of chemical reactions and processes; and
3. Valuable perfumes are produced by purely chemical means from raw materials which are not related to any essential oils.

The constituents of essential oils which find employment as chemically pure bodies, can in some cases be abstracted from the oils simply by mechanical means, either by frequently repeated fractional distillation in vacuo carried out systematically, or, if they solidify at a low temperature, by repeatedly freezing out the oils as such, or in a suitable solvent. The other constituents are then removed by separating them off in rapidly revolving centrifuges. In this manner menthol is obtained from peppermint oil, thymol from ajowan oil, eucalyptol from eucalyptus oil, anethol from anise, fennel, or star-anise oil, safrol and camphor from camphor oil, &c. But the process of purification is then in many instances not yet completed; one or more crystallisations from readily volatile solvents such as alcohol, ether, or petroleum ether, must still follow, before the preparation answers every requirement with regard to purity. As the above-mentioned solvents are very volatile and extremely inflammable, this crystallisation process takes place in a detached building situated at some distance from the others. By lighting this building from outside, and having the motive power for driving the necessary agitating and dissolving apparatus also outside, all electric conductors and motors which might be the cause of fire are banished from the workrooms themselves. The crystallisation takes place in a cellar in which the temperature is kept specially low by means of a refrigerator.

The separation of individual substances cannot always be accomplished in the mechanical manner just described, and for this reason it is often necessary to take advantage of the chemical properties of a substance, in order to isolate it from the oil. For instance, phenols are converted into alkali salts, aldehydes into

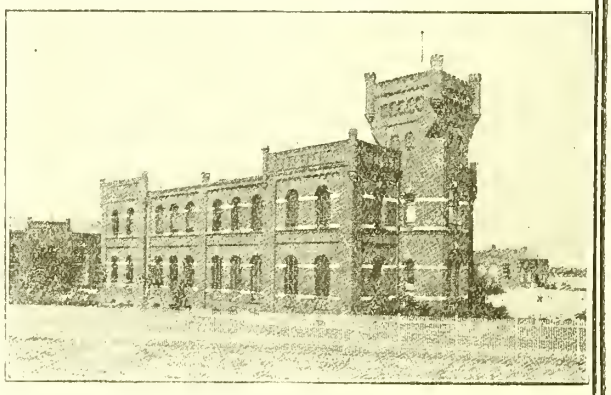


Fig. 5.

bisulphite compounds, alcohols into certain esters, so as to extract them from mixtures with other bodies. In this manner are obtained the phenols eugenol and carvacrol, the aldehydes citral and citronellal, the alcohols linalol, geraniol, and citronellol.

The esters of these and other alcohols, which are obtained from the alcohols with the corresponding acids, are highly valued as perfumes. We may mention as such linalyl acetate, and the

SCHIMMEL & CO., Miltitz, near Leipzig, And 27 Mincing Lane, LONDON, E.C.

salicylic acid esters of methyl and amyl alcohol. The valerianic acid esters of menthol and borneol, which are employed for medicinal purposes, have a less pleasant odour.

Constituents of essential oils, which in themselves are perfumes, are also frequently used as crude material for other more valuable perfumes. Thus, safrol is converted by oxidation into heliotropin, which again can be converted further into protocatechuic aldehyde and vanillin. But the same vanillin is also obtained by the oxidation of eugenol. The not very pleasantly smelling oil of turpentine is converted by suitable treatment into terpineol, which is highly esteemed in the perfumery trade on account of its lilac odour. A further category of perfumes is produced from materials which have nothing at all to do with essential oils. As an example may be mentioned coumarin, which is built up out of carbolic acid, acetic acid anhydride, and chloroform. Benzaldehyde, cinnamic aldehyde, benzyl alcohol, and artificial mustard oil also belong to this class of bodies.

For the manufacture of all these and many other products of which the enumeration would carry us too far, a large number of modern apparatus are employed, which are housed in the four separate factory buildings of the chemical department. They comprise single stills arranged for steam distillation, vacuum distilling apparatus with the vacuum pumps belonging thereto, centrifuges, filtering and hydraulic presses, exhausters, agitators, dissolving and mixing apparatus, shaking machines, drying stoves, ball mills, moute-jus, ice-making and refrigerating machines.

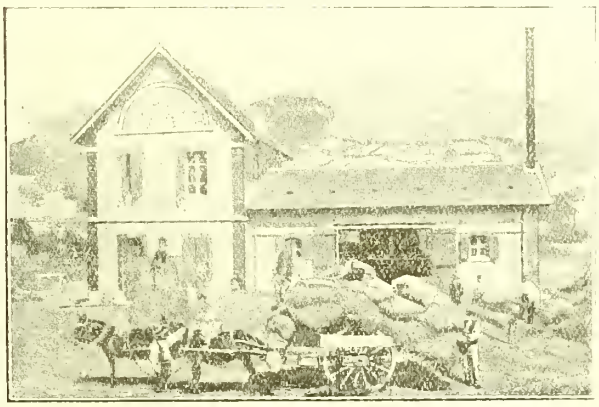


FIG. 6.

A special building contains the research and analytical laboratories—seven large, light and airy work rooms, each for two or three chemists; further additional rooms for weighing and combustion, cellars for storing chemicals and glass ware. This building also contains the collection of drugs and chemical preparations, which includes many objects of ethnological interest, and finally the library with more than 3,000 volumes and some 1 000 pamphlets, reprints, and dissertations. Here are found the most important chemical journals, some right from their first issue, and a complete collection of the pharmacopœias of all countries; chemical, botanical, pharmacognostical, medical, and technical cyclopedias, and 60 journals published in various languages, permit of a ready refereuce on all questions dealing with our branch.

In the laboratories, scientific work in the domain of essential oils is carried on, and new processes are worked out for the production of perfumes. The knowledge of the composition of valuable essential oils which has here been obtained by their examination, has led to the synthetic production of numerous blossom-oils. Of these we may mention rose oil, ylang-ylang oil, lilac oil, hyacinth oil, jasmine oil, orange blossom oil, cassie blossom oil, clove-carnation oil, wallflower oil, narcissus oil, and others.

In the analytical department every oil received is tested for its purity and quality, and its value ascertained; every product which is sent out from the factory is also examined, and has its properties determined. Only in this manner has it been possible to obtain data for judging foreign distillates and detecting adulterations, and to work out a large number of methods of examination of essential oils which are now recognised and employed all over the world. Our analytical laboratory is at the disposal of our clients, free of charge, for valuing essential oils and perfumes, and ample use is made of such opportunity.

We publish the results of our scientific researches and practical examinations in our semi-annual Reports, which in the commercial part keep our clients in touch with the occurrences on the world's markets, whilst the scientific part discusses all work that has even the remotest connection with our branch of industry.

Serum Department.

In the year 1904 our firm acquired Dunbar's patents for the manufacture of a serum against hay-fever, which has since been placed on the market under the registered name "Pollantin." Professor Dunbar, Director of the State Hygienic Institute of Hamburg, had experimentally demonstrated with certainty the relationship between hay-fever and the occurrence of grass pollen (already established by the first observers of this disease), and on this relationship had based his serum-therapeutics. His method consists in this, that healthy horses which by previous experiment have been found to be sensitive towards the hay-fever toxin, are injected hypodermically in increasing doses with aqueous triturations of grass-pollen or pollen of other plants which cause hay-fever (such are, for instance, the Ambrosia and Solidago species which come under consideration for the autumnal catarrh in North America). The horses usually react on the injection by local and general symptoms, and when the injection of pollen extracts has continued for several months, sufficient quantities of antitoxin have been formed in their serum, so as to serve (after several small samples of blood have been previously drawn for testing) for the production of serum. The injections are made and likewise the blood is drawn by an Assistant of the State Veterinary Institute of Leipzig University, who controls the state of health of all the horses serving for the serum production. The determination of the antitoxin-content is carried out, every time before the blood is drawn, and also the test of the prepared pollantin for freedom from germs made by Professor Dunbar in Hamburg, without whose special permission a serum is neither obtained, nor placed on the market. The antitoxin-content is measured, by comparison with normal solutions of hay-fever toxin and serum, on the eyes of a hay-fever patient who submits himself to this test.

The horses serving for the serum-production are kept in a stable covering nearly 3,500 square feet, with stalls for 14 horses, which has been built on the fields belonging to the firm. An isolating stable with separate entrance has been arranged for the observation of newly-arrived horses, and a special room is also used for making the injections, for operations which may be necessary, &c. Adjoining the stable is a covered, strongly built riding-ground to afford the exercise for the horses, necessary for the formation of the blood; the covered in surface measures 46 × 100 feet, whilst there is also an open space of nearly 1,000 square feet. The drawing of the blood takes place in a small corrugated iron shed adjoining the research laboratory, which has been arranged specially for the purpose in order to avoid as much as possible the carrying about of the blood. In this building the whole of the further manipulation of the blood, i.e. separation of the serum, evaporation in vacuo, pulverising, mixing, filling, is carried out. All the rooms and installations in which the serum is handled are specially adapted to the delicate nature of the material: they are situated on the first floor. The whole of the work with the inoculation-material, the serum, etc., is carried out with due observation of the rules of asepticism. A special room serves here for the treatment of the fresh serum, and the bacteriological control of the preparations. The pulverised pollantin is weighed off and packed by means of a mechanically operated Kilian machine of a capacity of 100 doses in 5 minutes, or about 1,000 doses per hour, which ensures the uniformity of every dose.

Social Welfare.

Much could be written regarding the institutions which the firm has founded in the interests of the well-being of the staff and workmen, numbering over three hundred. Detached villas and semi-detached houses are occupied by the employees in a beautifully situated village adjoining the works. A fine club house is a much appreciated feature in the welfare organisation. The social conditions under which the workmen live are a model of their kind in Germany, and that they are appreciated is shown by the statistics of the length of time the workmen have been with the firm. This section of the firm's business is treated at length in the booklet from which these particulars are abstracted.

SCHIMMEL & CO., Miltitz, near Leipzig, And 27 Mincing Lane, LONDON, E.C.

OLONIQUES

"Olonique" is the registered title of a new and unique form of concrete essence, drawn solely and wholly direct from the flowers by a new process, whereby the true and natural bouquet of the plant is preserved in a highly concentrated form. They are made in both liquid and solid form at the following prices:—

	PER OUNCE BOTTLE.		PER OUNCE POTTLE.
"OLONIQUE" WHITE ROSE	@ 10/-	"OLONIQUE" LILAS	@ 7/2
„ JOCKEY CLUB... ...	@ 10/-	„ PEAU D'ESPAGNE ...	@ 11/5
„ TREFLE	@ 11/5	„ ROSE	@ 17/7
„ CARNATION	@ 8/-	„ SWEET PEA	@ 10/-
„ CHYPRE	@ 11/5	„ YLANG YLANG... ...	@ 11/5
„ NEW MOWN HAY ...	@ 7/2	„ VIOLET	@ 22/10
„ HELIOTROPE	@ 11/5		

LIQUID OLONIQUES are also supplied in ¼ oz. and ½ oz. bottles at 1d. per bottle extra.

ALL THAT IS NECESSARY to produce unrivalled handkerchief extracts is to dilute with S.V.R. according to price of extract required.

ONE TRIAL WILL CONVINCE YOU OF THEIR EXCELLENCE.

LIQUID OLONIQUES are specially suitable for perfuming brilliantines, toilet paraffin, &c., being very effective and economical in use.

I also solicit inquiries for

Oil Geranium
„ Neroli Pet. Big.
„ Lavender
„ Bergamot.

Oil Almonds
„ Thyme
„ Lemon, &c.

Manufactured only by

CRESP-MARTINENQ, GRASSE, FRANCE.

Sole Agent for the United Kingdom:

C. SMITH,

83 QUEEN STREET, LONDON, E.C.

TO WHOLESALE AND EXPORT TRADES.

NEW SEASON'S GREEN

EXTRACTS, JUICES, &c.

ARE NOW READY FOR DELIVERY.

Ext. Belladon. Virid.
Ext. Hyoscyam. Bien. Virid.
Fol. , ,,
Essential Oil of Lavender,
Essential Oil of Peppermint,
Expressed Juices, Scammony Resin,
Jalap Resin, Elaterium,
Mercurial Pill and Ointment,
Aloin, Euonymin, Iridin,
Leptandrin, Dried Medicinal Leaves,
Dandelion Root, Sal Volatile.

MEDICINAL TINCTURES

AND SPIRITS PREPARED WITH PUREST SPIRIT
SUPPLIED IN BOND FOR EXPORT.

INTERNATIONAL EXHIBITIONS, LONDON, 1862, CHICAGO, 1893;
PRIZE MEDALS AWARDED FOR EXTRACTS, OILS, HERBS;
———ALSO AWARD AT PARIS EXHIBITION, 1867.———

W. RANSOM & SON,

(Estab. half a century), Mfg. Phar. Chemists, ————
Distillers of Essential Oils, Cultivators of Medicinal Plants,

Telephone No.: HITCHIN 0495 Nat.
Telegraphic Address:
"RANSOMS, CHEMISTS, HITCHIN."

Hitchin, nr. London.

Olea Aetherea sine Terpeno.

Heinrich Haensel's speciality since 1876.

The Original and Standard Preparations.

LEMON, ORANGE, LIMES, GINGER, NUTMEG, PEPPERMINT, ANISEED, DILLSEED, ETC., ETC.

CAUTION.—Beware of imperfect imitations and faked-up Essential Oils.

The word "Terpeneless" was invented and introduced by me, solely for **HAENSEL'S Patent Non-clouding** Essential Oils, which are distilled by a special process from the choicest **NATURAL** Oils. The great success of same **during the last 30 years** has quite recently induced other houses to make use of the word **"Terpeneless"** for imperfect imitations.

Manufacturing consumers who wish to employ the *most powerful* and *best keeping* state, should buy the bottles of 1 oz., 4 oz., 8 oz., and 1 lb., bearing the Fabrik-Marke. *natural* Essential Oils in the *purest*, **most soluble,** original, *genuine* "*Terpeneless*" Oils *only*, in **sealed** Registered Trade Mark of the Inventor.

Heinrich Haensel's Terpeneless Concentrated Compound **Oils of Eau de Cologne, Eau de Lavande, Eau de Quinine, Bay Rum Composition, Cananga-Water Composition, Conifer Spirit (Pine Bouquet) Composition,** Florida-Water Composition, Mouth-wash Composition (Peppermint or Eau de Cologne perfume) offer great advantages for the manufacture of perfumes owing to their **easy solubility, great concentration,** and **fine delicate aroma.** Save the solvent Alcohol.

WILLIAM POPPELREUTER, 54 Portland Street, MANCHESTER.

OTTO OF ROSE

Guaranteed Absolutely Pure.

S. SERAPHIMOFF & CO., KEZANLIK, BULGARIA.

Distillers of Pure Essence of Rose. Estab. 1880.

GOLD MEDAL, PARIS, 1900. GOLD MEDAL & DIPLOMA OF HONOUR, LIEGE, 1905. GRAND PRIZE, MILAN, 1906. GRAND PRIZE LONDON, 1907.

Sole Agents: E. N. FRANKENSTEIN & CO., Ropemaker St., Finsbury, London, E.C.

CORNS **CORNS**

ROSALINE

THE CELEBRATED CURE FOR

SOFT and HARD CORNS

7½d. and **1/-** per bottle.

Prepared only by

S. EDWARDS, PHARMACIST, **GODALMING.**

BEST TRADE TERMS.

NOTICE.

MILK EMULSION.

THE name "Milk Emulsion" is our Trade Mark for an Emulsion of Cod Liver Oil with Hypophosphites, and designates specifically that it is our preparation. Our Emulsion is known in commerce as "Milk Emulsion," and when "Milk Emulsion" is ordered people expect to receive FAULDING'S MILK EMULSION. We hereby give notice that no other persons can use the same name on their labels, wrappers or advertisements without infringing our legal rights.

"Milk Emulsion" is sold in Bottles only, Wholesale, by

F. H. FAULDING & CO.

54 Great Tower Street, London, E.C.
54 King William Street, Adelaide, South Australia.
341-3 Murray Street, Perth, Western Australia.
16 O'Connell Street, Sydney, New South Wales.

Essential Oils "Sachsse"

Terpene- and Sesquiterpeneless.

HIGHEST CONCENTRATION. BEST QUALITY IN THE MARKET.

Guided by the conviction that even the best commodities need some testimony as to their merits, we venture, in the following brief account, to direct your attention to our specialities, which appear to us destined to play a leading part in the Essential Oil industry. We refer to our

Terpeneless and Sesquiterpeneless Essential Oils "Sachsse."

I. What is aimed at in the production of Terpeneless and Sesquiterpeneless Oils?

It is a very general opinion among experts that essential oils embody the odoriferous or aromatic principle of the vegetable material from which, by distillation, expression or extraction, these oils are derived. This view is erroneous. It is more correct to state that only part of the constituents of an essential oil embody the aroma of the respective raw material, the remainder being indifferent or at any rate of less value as regards aromatic properties. As an example may be cited the delicately scented flavouring principle of lemon peel; this is not the **essential oil of lemon** itself but only a small fraction of it, as a matter of fact only some four or five per cent. of the total. This means that 95 or 96 per cent. of natural oil of lemon is quite unimportant as regards scent and flavour! In the case of **oil of orange**, only one or two per cent. are thus active, the remaining 98 or 99 per cent. being to all intent and purpose ineffective. The same applies to a greater or less extent to almost all the essential oils. It is only in quite isolated and exceptional instances, as, for example, the essential oil of bitter almonds, that the essential oil as a whole embodies the aromatic and flavouring principle of the vegetable substance.

Which then, from this point of view, **are the active substances in Essential Oils** and which the inactive?

Science furnishes an answer to this question: it is almost invariably the oxygen-containing chemical compounds which have the characteristic smell and taste of an essential oil, while, in the same manner, it is almost invariably the oxygen-free compounds which form those portions which are indifferent or of inferior value in these respects. A simple example of this may again be cited: **in Oil of caraway** the active aromatic constituent is an oxygen-containing chemical body, i.e., Carvol, while the indifferent constituent is an oxygen-free compound, a terpene called Carvene. Whereas the oxygen-containing bodies found in essential oils are recruited from a numerous class of chemical compounds, the further discussion of which here would lead us too far afield, the oxygen-free constituents belong chiefly to only two classes, viz. to the terpenes and the sesquiterpenes.

Thus, the importance of the designation "terpene- and sesquiterpeneless essential oils" will be readily understood; they are essential oils which have been freed from all constituents which are indifferent or of inferior value as regards aroma and flavour; in other words, they represent the pure odoriferous and aromatic principles of the vegetable kingdom released from all unimportant contaminations.

II. What properties are possessed by the Terpeneless and Sesquiterpeneless Essential Oils "Sachsse"?

The removal of the terpenes and sesquiterpenes naturally results in an increased richness of the oil thus refined; this is the case with the various essential oils in a degree proportionate to the amount of terpenes and sesquiterpenes present in the natural oil. For example, the increased richness or degree of concentration of **terpene- and sesquiterpeneless oil of lemon "Sachsse"** is twenty-five fold, i.e., one part of this oil corresponds to twenty-five parts of the natural oil of lemon. This high degree of concentration results from the circumstance, already mentioned, that natural oil of lemon contains only four or five per cent. of active substances.

Accompanying this greater concentration of terpene- and sesquiterpeneless essential oils "Sachsse" is to be found **greater delicacy of aroma,** since it is perfectly clear that **an essential oil must gain in delicacy of aroma in proportion as the odourless and tasteless constituents are removed.**

A further and very important advantage of the "Sachsse" essential oils is their **great stability.** It is, as a matter of fact, the terpenes in essential oils which, under the action of air and light, become resinous, whereby the delicacy of aroma of the oil is irretrievably impaired. A noteworthy exception to this rule is formed by the **terpene- and sesquiterpeneless oil of juniper "Sachsse."** This oil undergoes changes under the action of air and light in a very short time, and the only, but absolute certain remedy against the occurrence of this change is the solution of the quite freshly prepared terpene- and sesquiterpeneless oil in alcohol. The solution thus formed can be kept indefinitely. We therefore always recommend the keeping of oil of juniper "Sachsse" in alcoholic solution.

The particular property of our terpene- and sesquiterpeneless essential oils, upon which we pride ourselves, and which has raised them well above the level of all competing ones, is that of their **very great solubility in dilute alcohol.** The great majority of our oils are soluble in the proportion of 1, 2 or 3 of 69% (about 22 overproof) alcohol; **dilute alcoholic solutions of them are soluble in water!** This high degree of solubility is the criterion of their absolute purity and of the complete absence of terpenes and sesquiterpenes, for, in addition to their other inconvenient properties, terpenes and sesquiterpenes possess that of being but little soluble or completely insoluble in dilute alcohol. For this reason even a trifling percentage of terpenes and especially of sesquiterpenes will be betrayed by diminished solubility in alcohol of the respective product. Ready solubility in dilute alcohol is the touchstone which our products will withstand but upon which, without exception, competing products may dash to pieces.

Finally, as regards the economic aspect of the use of our terpene- and sesquiterpeneless essential oils, **their cost,** thanks to our perfected methods of production, **is so low that their use in the place of natural essential oils constitutes a pecuniary advantage.**

III. How are Terpeneless and Sesquiterpeneless Oils "Sachsse" used?

Upon this subject, naturally, only information of a general character can be given; this, however, in view of the wide range of application they enjoy in consequence of their great solubility in alcohol, will be found quite sufficient. **The degree of concentration** represented by each of the terpene- and sesquiterpeneless essential oils as compared with the natural oils **is stated** in optimum values **in our price list.** The possibility is thus afforded of employing our terpene- and sesquiterpeneless essential oils in the place of the corresponding natural oils. Very dilute spirit may be used for dissolving our Oils. Thus, in the majority of cases, 100 parts of 60% (about 7 overproof) or often even of 50% (about 11 under-proof) spirit suffices for the solution of one part of the Oils. Detailed information on the subject of the solubility of our oils is likewise to be found in our price-list. It is easy to convince oneself of their water-solubility by preparing a 1% solution of any one of the oils in 60—70% alcohol and pouring a small part of this solution into ordinary water; the essence forms a clear solution without sediment and will be found to render the water intensely aromatic.

We should not omit to add to our previous remarks the assurance that only first-class natural oils form the raw material of our terpene- and sesquiterpeneless essential oils "Sachsse." As a matter of fact, the manifold experiments which we have been able to make in the course of the evolution of these oils have only served to place us in the position of being able to make use of nothing but the finest varieties of natural oils. The advantages offered to consumers by the uniform quality and richness which characterise our terpene- and sesquiterpeneless essential oils will, we trust, be the means of securing your patronage.

Yours faithfully,

E. SACHSSE & CO., Leipzig (Germany).

Sole Agents for the United Kingdom: DOMEIER & CO., 8 Harp Lane, LONDON, E.C.

CHUIT, NAEF & Co.

GENEVA (Switzerland).

Manufacturers of

Synthetic & Aromatic Chemicals

invite special attention to the following products:

Cyclosia, new base for floral odours.
Phénéthylol, constituent of the natural Oil of Roses.
Linalyl Acetate, art. terpeneless oil of Bergamot.
Muskambrene, 40 times stronger than ordinary Musk.
Oils of Violets (art.), all grades for perfumes and soaps.
Iralia 100%, for new and lasting effects.
Persicol, new synthetic for fruit oil manufacturers.

Agents: E. N. FRANKENSTEIN & CO., Ropemaker Street, Finsbury, LONDON, E.C.
A. BEROU, 11 Rue du Perche, PARIS 3e Arrt.
UNGERER & CO. (Inc.), 273 Pearl Street, NEW YORK.

SAMPLES AND PRICE LISTS SENT ON APPLICATION

"B.&K." BRAND OTTO OF ROSE

GUARANTEED PURE. DISTILLED BY BONTCHEFF & KIDOFF OF KAZANLIK.

SOLE AGENTS IN THE UNITED KINGDOM:

Fredk. Boehm Ltd

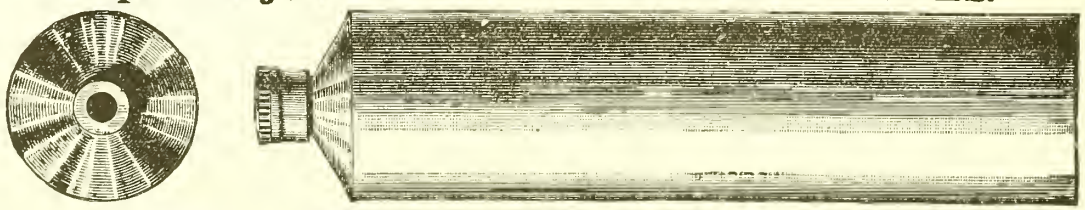
16 Jewry Street, London, E.C.

Wholesale Quantities only.

METALLIC COLLAPSIBLE TUBES

For Paints, Perfumes, Shaving Creams, Soaps, Oils, &c.

Speciality: COLOURED and ORNATE TUBES.



Packed in Boxes with separate compartments for *each Tube,* thus obviating damage in transit.

Samples and Prices on application.

L. LUMLEY & CO. Ltd., 1 America Square, LONDON, E.C.

DAGGETT & RAMSDELL'S
PERFECT COLD CREAM.
"The kind that keeps."



The most delightful of all toilet accessories. Known and renowned in every country where daintiness of the toilet is recognised as a mark of refinement. Its popularity is due to its unvarying quality, its absolute purity and the fact that it

NEVER BECOMES RANCID.

Different from and superior to all other cold creams. Not affected by heat, cold or climatic changes. Retains to the last its snowy whiteness, delicate perfume and wonderful properties which have given it international fame.

OBTAINABLE FROM ALL WHOLESALE HOUSES.

Made only by
DAGGETT & RAMSDELL,
Manufacturing Chemists,
17 Charterhouse Buildings, Goswell Rd.
LONDON, E.C.

Essential Oils.
Neroli, Petit Grain, Lavender, Geranium, Orange, &c.

VIOLET FLOWER POMADES.

PERFUMES.

E. Ihermine & Cie.
NICE, FRANCE.

"ODOURESSENCES" and CONCENTRATED PERFUMES *free from Alcohol.*

Sole Agents for U.K.—
MARTIN, SPINEL & CO., 93 Aldersgate St. LONDON, E.C.

D. Pappazoglou,
KEZANLIK, BULGARIA.

FINEST GENUINE
OTTO OF ROSE.

I make a speciality of pure oil with lowest natural percentage of stearoptene.

Sole Agent: W. NAUMANN,
U.K. & Colonies]. 63 Bartholomew Close, London, E.C.

A. Boake Roberts
&Co., Ltd..
STRATFORD, LONDON, E.

. . FOR . .

SOLUBLE ESSENCES, ESSENTIAL OILS, OIL LEMON.

If you wish to make first-class ∴ Aerated Waters, use ∴
BOAKE ROBERTS' ESSENCES.

Finest Soluble Essences:

Lemon,
Orange,
Ginger,
Ginger Ale,
Stone Ginger Beer *(Cloudy),*
Clear Ginger Beer,
Kola Champagne,
Lime Juice and Soda,
Lemon Squash,
Raspberry,
Strawberry,
Pineapple,
Vanilla, &c. &c.

COLDEN CARAMEL COLOURINGS, &c. and all sundries.

A. Boake Roberts
& Co., Ltd..

We are not only **Headquarters** for

ARTIF. MUSK 100 %

but also **Makers** of

Magnolia,
Lyseol, Muscarol,
Artif. Otto of Rose,
Artif. Neroli.

and other high-class novelties, for the **Perfumery and Allied Trades.**

Free Samples and Price-List are sent on application.

N. V. FABRIEK van CHEMISCHE PRODUCTEN
voorheen W. MALLMANN at ROERMOND (Holland)
Cable Address: MALLMANN. ABC 4th and 5th Editions and Private Codes used.

PRIVATE

Brand Makers of Toilet and Medicinal Soaps

Manufactured by us so that they reflect credit upon you and your goods.

TOILET SPECIALITIES FOR THE TRADE.

H. BRONNLEY & CO., Ltd., *Warple Way . . ACTON, LONDON, W.*

Our Factory is within five minutes' ride of Shepherds Bush and Hammersmith Tube and Railway Stations.
Acton Trams and Buses pass the door.

HAVE YOU SEEN THE . . .

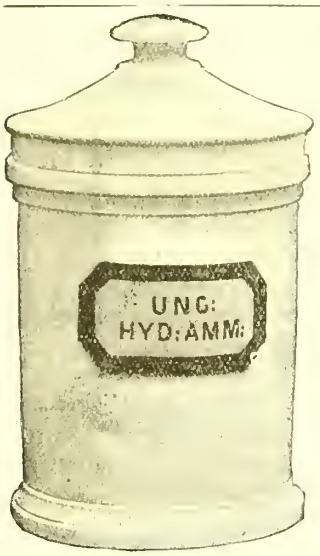
"MAY QUEEN" TOILET SOAP.

A Delicately Perfumed Powdered . . .

PACKED IN PRETTILY DECORATED SPRINKLERS.
The only Safe and Sanitary way to use Soap for the Toilet, Bath and Shaving.

GUARANTEED the PUREST Toilet-Soap Made.

HENRY SHAW & Co., Dukinfield.



EXPORT SUNDRIES.

A MODERN HOUSE,
with MODERN IDEAS
and MODERN PRICES.

HENRY W. BUSH & CO.

LIMITED

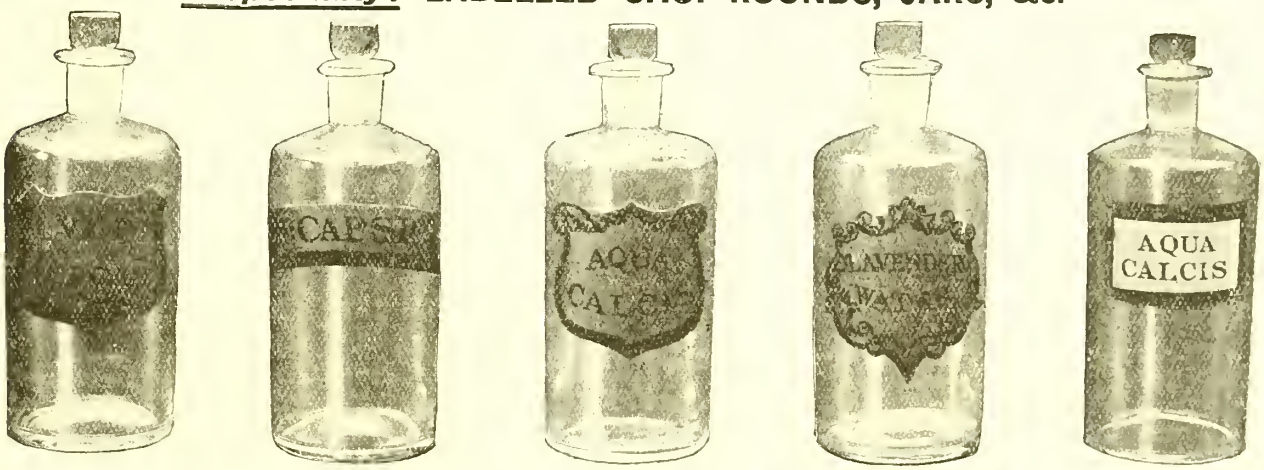
MANUFACTURERS,

Rembrandt Works, Commercial Street,
LONDON, E.

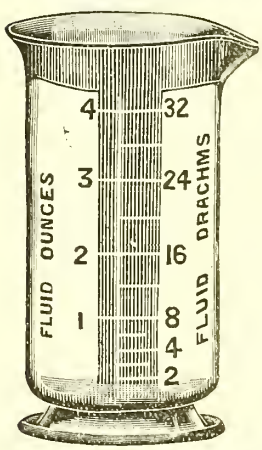


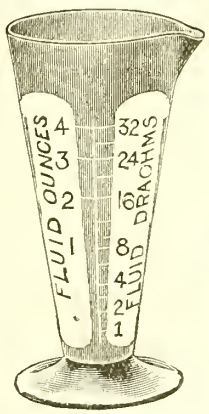
MENTHOL, all kinds.

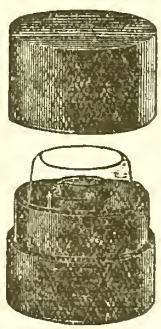
A Speciality: **LABELLED SHOP-ROUNDS, JARS, &c.**

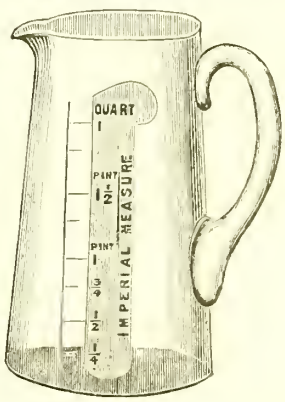


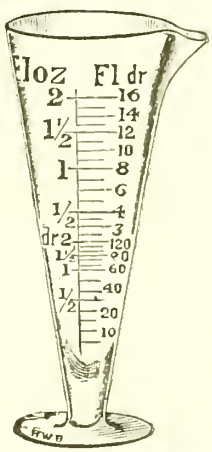
A Speciality: **GRADUATED GLASSWARE, MEASURES, TUMBLERS, &c.**



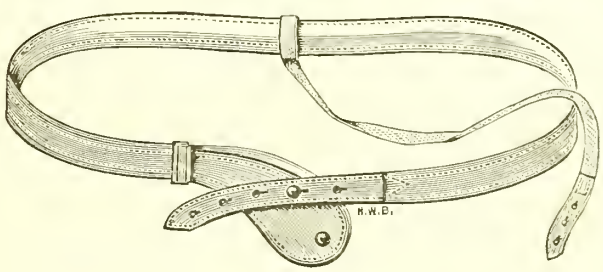








MAKERS OF
CLINICALS,
SYRINGES,
SANITARY TOWELS,
STOPPERED BOTTLES,
&c. &c.



MAKERS OF
DOUCHE CANS,
FILTERS,
FEEDING BOTTLES,
SUSPENSORY BANDAGES,
&c. &c.

When Ordering Pepsin Specify Armour's!

It is the best the market affords.

"Armour" Pepsins are high-grade, non-hygroscopic, perfectly aseptic, free from objectionable odour and taste, and

ANSWER OFFICIAL REQUIREMENTS

IN

EVERY PARTICULAR.

Supplied in 2500, 3000, and 5000 Tests.

ARMOUR & COMPANY, Ltd.,

ATLANTIC HOUSE, HOLBORN VIADUCT, LONDON, E.C.


SOAPMAKERS
BY
SPECIAL APPOINTMENT
TO
HIS MAJESTY
THE
KING
SOAPMAKERS
BY
SPECIAL APPOINTMENT
TO
HER MAJESTY
THE
QUEEN

PEARS

RETAIL PRICES.		WHOLESALE PRICES. PER DOZEN.
6d.	SIZE, unscented	4s.
1s.	,, all shapes, Washing or Shaving	8s.
1s. 6d.	Ditto Ditto	12s.
2s. 6d.	(The Washing Tablets are perfumed with Otto of Roses)	20s.

TRANSPARENT GLYCERINE 2s. per Box of 3 Tablets 16s. per dozen. Boxes.

DISCOUNT of 20 per Cent.

On all ORDERS of NOT LESS than £5

If accompanied by Remittance.

(Lesser quantities 15 per Cent. Discount only.)

IMPORTANT STATEMENT.

No Dealer in the Kingdom, for any quantity whatever, obtains more than the above **20 PER CENT.** Discount.

(Signed) *A. & F. Pears Ltd.*

71-75, NEW OXFORD STREET, LONDON, W.C.

PEARS

21 PRIZE MEDALS.

The highest possible distinction obtainable has been awarded in every competition at every International Exhibition, at home or abroad, since 1851, to Grand Prix at Paris in 1900.

FULL PRICE LIST and SHOW CARDS

can be obtained on application.

DEPÔTS:

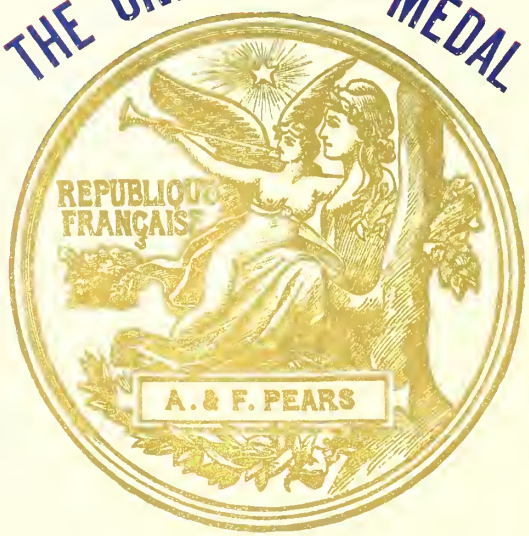
LONDON = = 71=75, New Oxford St.
NEW YORK = 365 & 367, Canal St.
CHICAGO = 232 & 234, Randolph St. ~~208 & 210, Lake St.~~
MELBOURNE = 495=497, Bourke St.

PEARS

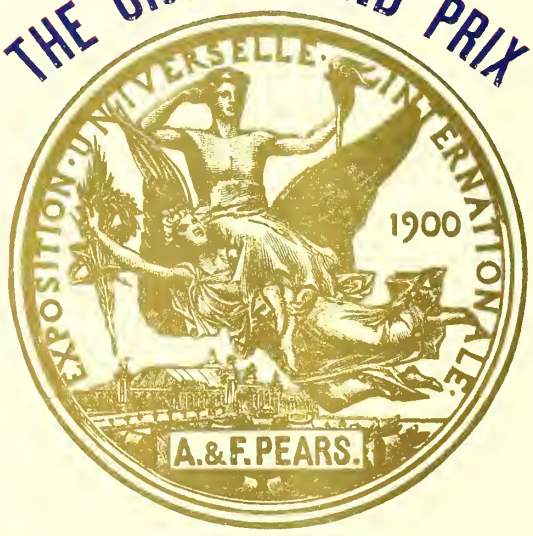
21 Highest Awards

INCLUDING

THE ONLY GOLD MEDAL



THE ONLY GRAND PRIX



The ONLY Gold Medal and ONLY Grand Prix ever awarded

SOLELY FOR TOILET SOAP

AT ANY INTERNATIONAL EXHIBITION IN THE WORLD.

AWARDS:—London, 1881; Vienna, 1883; Calcutta, 1884; Chicago, 1893.

BAISS BROTHERS & STEVENSON,

LIMITED,

Wholesale Druggists & Manufacturing Chemists,

CONTRACTORS TO HIS MAJESTY'S GOVERNMENT,

The Admiralty, The War Office, The India Office,

THE PRINCIPAL LONDON AND PROVINCIAL HOSPITALS.

Contractors to various Foreign Governments.

TO COLONIAL BUYERS *IN THE EMPIRE BEYOND THE SEAS.*

SPECIAL C.I.F. RATES GIVEN.



JEWRY STREET, LONDON.

New Drug Mills and Laboratories—"GRANGE WORKS," BERMONDSEY, S.E.

AWARDS.

LONDON, 1881. VIENNA, 1883.
CALCUTTA, 1884. CHICAGO, 1893.



Ice Manufacturers and others

Should communicate with us. Specimen invoices given showing the terms on which we can sell ETHER ·720, &c., ANHYDROUS AMMONIA, CALCIUM CHLORIDE, SULPHURIC ACID, FRUIT and SOLUBLE ESSENCES, OIL OF LEMON (guaranteed purity), &c., C.I.F. any port in the world.

Zinc Oxide. "Othniel" Brand.

This Oxide, being prepared by direct combustion of the metal, is practically *chemically pure*, testing 99·8% ZnO, and far exceeds the requirements of the B.P. 1898. It is the whitest, finest, and lightest in the market.

Beechwood Creasote.

Our "Othniel" brand contains the full percentage of Guaiacol, and fully answers all the B.P. Tests. The price has been considerably reduced.

Pepsin Porci, P.B.

Guaranteed to answer the B.P. requirements, to be manufactured under perfect aseptic conditions, and fully equal to the best American brands.

This Pepsin is absolutely non-hygroscopic, free from any disagreeable odour, and will not deteriorate in digestive power with age.

Dr. Nesbit's "Circloids." (Regd.) "Othniel" Brand.

This is a New Special Compound Perle, prepared according to Dr. Nesbit's Formula. The price is ***10/6*** doz., net.

Concentrated Apiol "Circloids" (Regd.)

A specially *distilled* Essence of Apiol, differing entirely from ordinary Apiol. There is a large demand for these goods. Price ***20/-*** doz.

SOLE PROPRIETORS OF THE "OTHNIEL" BRAND

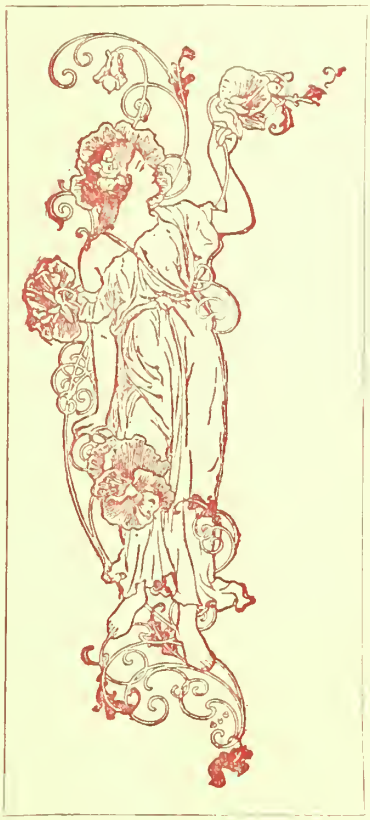
BAISS BROTHERS & STEVENSON,

LIMITED.

Manufacturing Chemists, JEWRY STREET, LONDON, E.C.

AWARDS.

LONDON, 1881. VIENNA, 1883
CALCUTTA, 1884. CHICAGO, 1893.



Dr. Mackenzie's Malted Food

and

Dr. Mackenzie's Milk Food.

These are excellent and *very profitable* lines for Chemists abroad to take up. Full particulars on application.

Santal Perles "Othniel" Brand.

Comment on these is unnecessary.

As the "*C. & D.*" says: "They are THE Perles of the land."

9/- doz. net. 12 doz., 8 6 net.

Acid Sulphuric, C.I.F. any port.

Guaranteed best Concentrated Acid free from Nitrous compounds and the usual impurities. In cases, drums, and all other packages.

Coca Miscible Extract & others,

6/- lb. in W. Qts.

Four ounces added to one gallon of Wine, as directed, is the most convenient and economical method of producing Coca Wine.

"Krysyl" and "Pinesyl" (Stevenson).

These two well-known Disinfectants, both quite miscible with water, and forming a white milky solution, are capable of great extension in helping to build up a business.

Concentrated Vinegar Essence (Stevenson).

Now generally imitated. In *1/-* bottles (*8/-* dozen), sufficient to make 1 gallon of Best Vinegar; or in casks, *5/6* gallon.

SOLE PROPRIETORS OF THE "OTHNIEL" BRAND

BAISS BROTHERS & STEVENSON,

LIMITED.

Manufacturing Chemists, JEWRY STREET, LONDON, E.C.

IN SELLING OUR

Cod Liver Oil Emulsion

you become personally identified with a Preparation which will do you credit, and one in which a large business is being daily built up by wide-awake Chemists, who find it more profitable to offer an Emulsion which is practically their own proprietary, rather than preparations under a maker's name which may be bought at any of their neighbours'. In our opinion the Chemist himself is the best judge as to the price which can be obtained in his neighbourhood for his own preparations, and this is a point we have endeavoured to emphasise from the first.

This Emulsion has never been equalled!

Made from the finest Norwegian Cod Liver Oil



with the most approved and up-to-date Machinery.

Our Emulsion remains permanently sweet and without separation.

In order that two or more friends located in one town may not conflict with each other's Speciality, we submit a few only of our designs to enable the Chemist to select the one he would like to push.

No. 1. "Gold Fish" Brand. A design worked out in black and gold on a white ground.
No. 2. Panelled bottles. Labels designed in white and mauve, with black and gold lettering.
No. 3. The "Crown" Brand. Black and gold lettering on a white ground.
No. 4. Bent bottle. Black and Gold on a blue ground.

Nos. 1, 3, and 4 we put up in 3, 6, 12, and 24-oz. bottles, but No. 2 we only put up in 8 and 16-oz. sizes. All bottles are of best white glass.

Baiss Brothers & Stevenson, Ltd.,

Manufacturing Chemists, **JEWRY STREET, LONDON, E.C.**

Telegraphic Address:—"POUDRE, LONDON.



"LEHCARESOR"
Papier Poudre

PAPIER POUDRÉ, LIMITED,

23, SOMERSET STREET, LONDON, W.



ON THE P.A.T.A. LIST.

Below, Messrs. PAPIER POUDRÉ, Ltd., have the pleasure to submit an exact reproduction of their scored, stiff-covered, NEW 4½d. BOOK, costing 30 - per gross. This is sold in the usual three tints,—WHITE, ROSE and RACHEL,—contains 74 leaves of PAPIER POUDRÉ, and, for orders of not less than one gross, they will print any name and address gratis, in the small space at foot of the front cover.

PERFUMED OR UNPERFUMED.

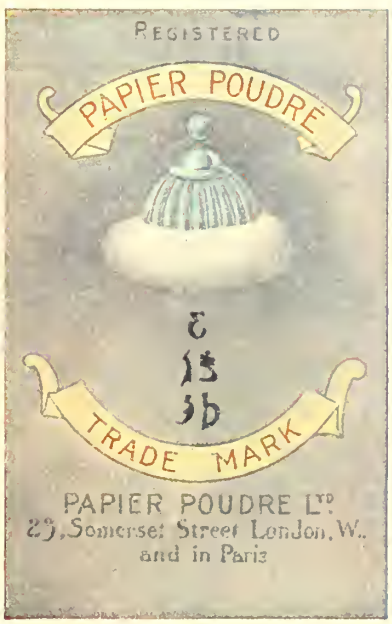
SAMPLES & SHOWCARDS FREE, either direct or through THE USUAL WHOLESALE AGENTS.

BEWARE

OF

SPURIOUS

IMITATIONS



PAPIER POUDRÉ WHITE



NONE GENUINE

NOT BEARING

OUR NAME &

TRADE MARKS

This new line is in addition to, but in no way in competition with, th established original lines which now command such world-wide and well deserved popularity, & the binding & appearance of which will remain absolutely unaltered, viz :—

d. SIZE 2" × 3", containing ninety leaves	In White,	3 9 per dozen,	as heretofore
/- SIZE 4" × 3", do.	Rose,	7 6	do.
d. SHAVING PADS, do.	or	3 9	do.
EAT 1/- MIRROR CASES containing Pads of PAPIER POUDRÉ	Rachel	7 6	do.
EFILLS to these MIRROR CASES	Tints.	2 -	do.
d. SIZE, 2" × 3" containing 40 leaves (in limp covers)		2 -	do.

NVALUABLE to Ladies whilst Shopping, alling, Dancing, Motoring and Travelling. and to Gentlemen after Shaving.

SIMPLY detach a leaf and pass the powdered side over face and hands. It will remove all dust and smuts, and produce a most refreshing feeling.

n Winter —— The Skin, without the protection, such as good powder affords, is apt to get dry and harsh through the biting winds and changing weather.

n Summer —— There is the discomfort that arises from the greasy appearance of the skin, and the irritated feeling born of the knowledge of beauty spoiled.

n Winter & Summer —— The ideal means of retaining that fresh appearance and charming complexion which pleases owner and beholder.

Mrs. A. S. BUTLER, Managing Director. E. A. ROURKE, Secretary. C. EDENBROUGH, Sales Manager.

P.T.O.

MESSRS. PAPIER POUDRÉ, LIMITED, venture to draw special attention to the delightfully refreshing and antiseptic nature of PAPIER POUDRÉ when used after shaving—to dry and smooth the skin.

Now that so many people regard the ordinary powder puff with misgiving, and the powder spray also has its objections, it is thought that PAPIER POUDRÉ will be found a very much appreciated substitute in the shape of a

NEW 6d. SHAVING PAD, 3/9 PER DOZ.

It is proposed to sell these pads, containing 90 such leaves of PAPIER POUDRÉ (secured by a silk cord passed through the left hand top corner whereby to hang up the pad conveniently near the shaving chair), to retail at 6d. to the public (terms usual), and Messrs. PAPIER POUDRÉ Limited, venture to hope that it will be found on using it on customers after shaving them, that it will lead to a ready and lucrative sale of PAPIER POUDRÉ in this form.

To enable the hairdressing trade to give these pads every chance, it is proposed to give one pad in, gratis, with all orders of 12 pads, thereby providing one pad to every dozen for the hairdressers' free use upon their customers. This, it is hoped, will justify their favouring PAPIER POUDRÉ, LIMITED, with a trial order, not necessarily direct, but preferably through your usual channel of supply, to test this novel and pleasing idea.

RESOLUTELY REFUSE IMITATIONS.

"POPPŒA" CRÉME POUDRÉ. MESSRS. PAPIER POUDRÉ, LIMITED manufacture a Liquid Powder, in three tints, guaranteed harmless to the most delicate skin. For the face, neck, and arms, it is invaluable for use in the evening, and applied before going motoring, it keeps the skin from being sunburned, or getting roughened by the wind or long exposure to the open air, it is very daintily put up, and retails at 3/6 bottle, price 24/- per dozen.

"POPPŒA" MASSOLINE SKIN FOOD the original! as used by the late Empress of Austria, is a great boon to ladies travelling, as a little used morning and evening will make the skin like velvet and will completely fill the tiny lines and hollows caused often by ill health or inattention to the skin, jars 24/- dozen.

"POPPŒA" CIRCASSIAN CREAM for use by ladies who find soap does not suit their skin, it whitens and beautifies the complexion. It is not a skin food, but as it clears the pores it is a great cleanser! Jars 24/- dozen.

Our Trade Marks and our Seal on every Packet, none Genuine without!

P.T.O

TO USE THIS INSET AS A SHOW-TABLET, CUT ALONG THIS LINE.

SUPPLIED TO THE  ROYAL HOUSEHOLD

Vibrona

THE IDEAL TONIC WINE

REFRESHES THE STRONG
RESTORES THE WEAK
REVIVES THE DEPRESSED

SOLE PROPRIETORS:
FLETCHER, FLETCHER & Co, Ld, LONDON & SYDNEY.



VIBRONA Window Display at Messrs. Inman's Stores, Ltd., Chemists, Shandwick Place, Edinburgh.

COURVOISIER'S

PERFUMERY & TOILET SOAPS.

The GOLD MEDAL has been awarded
to us at the Franco-British Exhibition for
excellence and quality.



OTTO OF VIOLETS

Adds a charm
to Personality.

~~1/5½~~ 1 8
~~2/9~~ 3/2
~~5/4~~ 6/-
~~10/3~~ 11/9
~~20/-~~ 22/6



HAVANITA PERFUME

The Perfume
of the Antilles.

2/3 ~~2/-~~
4/3 ~~3/9~~
7/6 ~~6/9~~
14 6 ~~12/6~~



Wholesale Prices,
~~13/6 26/- 50/- 94/- 180/-~~ Doz. nett.
14 10 28/7 55/- 103 6 198 " "

Wholesale Prices,
16/- 30/- 54/- 102/- Doz. nett.
17 8 33 59 6 112 6 " "

ENHANCES
PERSONAL CHARM.



2/6
Per Box
of
3 TABLETS

Wholesale Prices,
21/- per Doz. Boxes nett.





2/9
Per Box
of
3 TABLETS

Wholesale Prices,
24/- per Doz. Boxes nett.

WHOLESALE—H. BRONNLEY & CO., LTD., LONDON, W.

A NEW DEPARTURE

COURVOISIER'S



C C

(CONCENTRATED)

PERFUMES

(WITHOUT SPIRITS)

When purchasing, mention C.C. with the name of the perfume.



Actual size of Vial.

VIOTTO, C. C.

HAVANETA, C. C.

LILY OF THE VALLEY C. C.

ROSE, C. C.

30/- Per dozen nett. 3/9 Per vial retail.

A tiny vial, yet containing more essence than an ordinary bottle of perfume at a higher price.

A ready selling line backed by advertising and giving entire satisfaction to the purchaser.

Entered on the P.A.T.A.

A STRONG SELLING ARGUMENT.

Courvoisier's C.C. Perfumes contain no spirits, therefore they, and incidentally the purchaser pay no spirit duty.

Of your Wholesaler or direct from:-

H. BRONNLEY & Co., Ltd.,

ACTON VALE, LONDON, W.

HAVE THE BEST

THE BEST FINISH TO A PRICE LIST, CATALOGUE or BOOKLET
IS A HIGH-CLASS EMBOSSED COVER.

ORIGINAL DESIGNS.

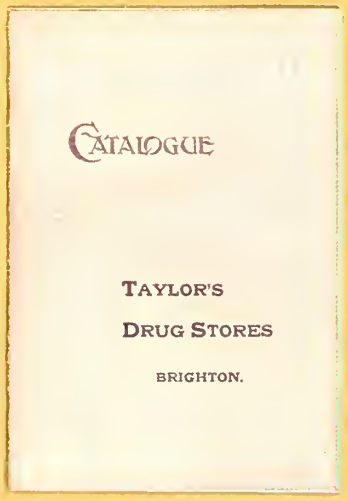
SEND FOR SAMPLES AND ESTIMATES.

FOR LITTLE MONEY

WE CAN GIVE YOU SOMETHING GOOD THAT WILL BRING YOU MUCH MONEY



ACTUAL SIZE, 8 × 5½.





MONEY WELL SPENT IN BUYING THE BEST IS NEVER MONEY WASTED, AND MONEY SPENT WITH US IS WELL SPENT MONEY

SPECIALITY *GOLD SEALS.*

Special prices for quantities.

This Size, *2/6 1,000.*

WATFORD EMBOSSING CO. WATFORD, HERTS.

Business Christmas Cards.

WISE TRADERS avail themselves of the Christmas Season to present their customers with some graceful little gift as a grateful recognition of favours received and "a lively sense of favours to come."

We are preparing some unique designs in combined Calendar and Christmas Cards specially for this purpose, and shall be pleased to submit samples when ready. Early applications for same will be much esteemed.

Extract from "The Chemist and Druggist,"
WINTER ISSUE.

It is well to reinforce Newspaper and Magazine Advertising with Booklets. These afford the Advertiser ample space to interest, educate, and to convince the public.

In this as in every other kind of Advertising the same rule holds good: printers' ink accomplishes much, but it is not magic. To bring results it must be applied with a trained hand guided by a mind enriched by life's experience, a mind original in its outlook and facile in its methods of expression.—*Verbum Sap.*

WATFORD EMBOSSING Co. WATFORD, HERTS.

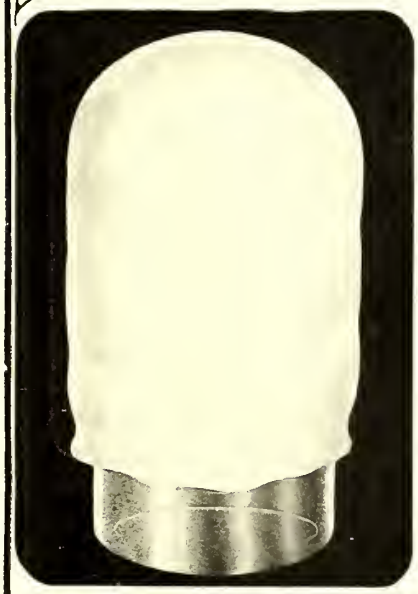
VISCOSE BOTTLE CAPS

FOR CAPPING EVERYTHING.

The Simplest, *The* Nicest Appearance

The Most Efficient,

Airtight, Spirit Tight, Stronger than Skins.



ALL YOU DO

PUT THE CAP LOOSELY OVER THE NECK OF THE BOTTLE

THE CAP SHRINKS AND GRIPS



No Adhesive Tieing or Manipulation.



THE CAPS FIT EVERYTHING—LIKE A GLOVE—

Whether Corked, Stoppered or Sprinklered.

CAPPING UP-TO-DATE.

VISCOSE BOTTLE CAPS.

ABSOLUTELY THE BEST CAPPING FOR EVERYTHING.

Equally Suitable for Corks, Stoppers, or Sprinklers.

Most Brilliant, Elegant Appearance. Superior to the very best skins.

Capping is obtained by anyone without Skill or Practice.

About 5 SECONDS to put on.



TRANSPARENT VISCOSE CAP
When just put on—Wet and Loose.

Supplied in Opaque
WHITE, RED, BLUE, and GREEN.

In Various Sizes for Bottles having Outside Diameter Measurements of from ⅜-inch to 2 inches.

PRICES FROM
1s. 4d.
Per Gross.

Supplied in Transparent
Clear, Red, Blue, Green, & Amber.



TRANSPARENT VISCOSE CAP
After about Three Hours—
Dry and Air-tight.

POINTS ABOUT THE VISCOSE CAPPING

CHEAP, STRONG, CORKS OR STOPPERS **CANNOT MOVE** WHILE CAPPED.
CAN BE KEPT PERMANENTLY CLEAN AND BRILLIANT. SELF-FIXING.
SAVES LABOUR, AND IS ABSOLUTELY SIMPLE. NO STRING OR ADHESIVE REQUIRED. SUITABLE FOR CAPPING EVERYTHING.

AIR-TIGHT and SPIRIT-TIGHT.

WHEN ORDERING STATE:

(a) **Size number of Cap (or give actual Outside Diameter Measurement of Lip of Bottle).**
(b) **Quality (whether Transparent or Opaque).**
(c) **Colour of Cap required.**
(d) **If for Export, as special packing in solution is necessary.**

FURTHER PARTICULARS FREE ON APPLICATION.

Viscose Development Co. LTD.

'Phone: 1629 HOLBORN.
Tele.: VISCOID, LONDON.

3, New Court, Carey St., W.C.



Show-card, 18 by 14 in., will be sent on application to

FICKUS, COURTENAY & Co., St. Dunstan's Buildings, London, E.C.

No. 4 EAU DE COLOGNE



12 oz. Decanter

P.A.T.A. Protected Prices

☞ SPECIFY **No. 4** WHEN ORDERING

Agents for England and Wales:

FICKUS, COURTENAY & Co., St. Dunstan's Buildings, London, E.C.



HAWLEY'S COUNTER ADJUNCTS

NEW "NAIAD" SERIES—BEAUTIFULLY PRESENTED IN GREEN & PURPLE TINTS. SAMPLES ON APPLICATION

	Doz.
CARBOLIC TOOTH POWDER .	3/6
,, ,, ,, .	5/6
SWEET LAVENDER SOAP, boxes of 3	9/-
WITCH HAZEL FOAM, 1½ oz.	3/10
,, ,, ,, 2½ oz.	5/9
(Cartons 9d. and 1/- doz. extra.)	
LAVENDER SCENTED AMMONIA, 10 oz.	4/-
,, ,, ,, 20 oz.	7/3

	Doz.
BATH POWDER . . ½ lb.	3/9
,, ,, . . 1 lb.	6/9
FULLER'S EARTH . .	2/6
,, ,, . . .	4/-
TOILET OATMEAL . .	3/3
,, ,, . .	6/-
SHAMPOO POWDERS, (7 in box)	8/6
POUDRE DE RIZ (assorted) .	4/6
VIOLET POWDER . .	3/-
,, ,, . .	5/-

(All above, except the Soap, with Chemist's name and address.)

EVANS SONS LESCHER & WEBB Limited

LONDON AND LIVERPOOL



SUMMER SPECIALITIES

SPECIAL ATTENTION IS DRAWN TO THE BEAUTIFUL EXAMPLES OF HIGH-GRADE MODERN COLOUR PRINTING IN THE ABOVE; SAMPLES ON APPLICATION

		Doz.
SALINE (F) in Cartons .	6 oz.	7/–
,, ,, ,, .	8 oz.	8/9
,, (F) ,, .	6 oz.	6/6
,, ,, ,, .	8 oz.	8/–
(Above in Powder or Granules)		
CARLSBAD SALTS . .		6/9
SULPHUR & SARSAPARILLA SALTS		5/6
LIVER SALTS . .	8 oz.	8/9
MARIENBAD SALTS .	8 oz.	8/9
SEIDLITZ POWDERS (12)		
Best boxes		6/3
Cheap boxes . . .		5/3
SEIDLITZ POWDERS (6) .		3/3

CITRATE OF MAGNESIA

		1	2	3
(Round faced bots.)	6 oz.	5/–	4/6	4/–
,, ,,	8 oz.	5/9	5/3	4/9
,, ,,	12 oz.	8/3	7/9	7/–

EVANS SONS LESCHER & WEBB Limited

LONDON AND LIVERPOOL



High-grade Adjuncts *for* Progressive Pharmacy

	Doz.
BLACK CURRANT COUGH ELIXIR	6/9
HAIR DYE (one solution, assorted colours)	8/-
AMMONIATED QUININE CAPSULES (3 gr.)	7/6
HAIR RENEWING CAPSULES	7/6
NURSERY HAIR LOTION, 6 oz.	3/9
,, ,, ,, 12 oz.	7/-
HAWLEY'S MILK SUGAR (On P.A.T.A. 1/3.)	11/-
CUCUMBER & GLYCERINE EXTRACT	4/-
,, ,, ,, ,,	7/9
ROSEMARY VINEGAR, for HAIR 8 oz.	6/-
RUBBING OR HEALING OINTMENT	3/6
WILD CHERRY PECTORAL	7/-

NAME AND ADDRESS ON 3 DOZENS AND UPWARDS. REDUCTIONS IN 6 AND 12 DOZEN QUANTITIES, AS PER LIST

EVANS SONS LESCHER & WEBB Limited

LONDON AND LIVERPOOL



Goods Well Presented are Quickly Sold

EMULSION OF COD LIVER OIL

		Doz.
Wrapped . . .	3 oz.	4/6
,, . . .	4 oz.	5/–
,, . . .	6 oz.	6/9
,, . . .	8 oz.	8/–
,, . . .	12 oz.	11/–
,, . . .	16 oz.	14/–
Do. do. "Special" unwrapped . .	3 oz.	3/9
,, . .	6 oz.	6/–
,, . .	12 oz.	10/–

EXTRACT OF MALT AND OIL AND EXTRACT OF MALT

For prices in various sizes and styles see our lists

EMULSION OF PETROLEUM

		Doz.
Wrapped . . .	6 oz.	6/6
,, . . .	12 oz.	11/–

OUR EMULSIONS ARE MICROSCOPICALLY PERFECT & DELICATELY FLAVOURED.
REDUCTION ON SIX AND TWELVE DOZ. LOTS. SPECIAL RATES FOR CONTRACTS.

EVANS SONS LESCHER & WEBB Limited
LONDON AND LIVERPOOL

"Ye Oldeste Essence Distillers"



W. J. BUSH & Co. Ltd.

ASH GROVE · HACKNEY · LONDON N.E.

BRANCHES AT

MITCHAM SURREY
MESSINA SICILY
GRASSE FRANCE
NEW YORK
MELBOURNE, SYDNEY
MOSCOW



SOL. ESS. LEMON No. 1.

AND

OIL OF LEMON, W.J.B. SPECIALITY

ARE UNSURPASSABLE AS EVER

W.J. BUSH & Co. LTD.

ASH GROVE, HACKNEY, LONDON, N.E.

CARNATION

Perfume

TRUE
TO NATURE

From 1/6
Per Bottle



Buisson Frères
London
Paris Grasse

W. J. BUSH & CO., LTD., Ash Grove, Hackney, London, N.E.

BUISSON FRÈRES'

CARNATION PERFUME

The Leading Odour
of the Season

For Wholesale Trade and
Particulars apply

W. J. BUSH & CO.,

Ash Grove, Hackney London, N.E.

PENNY TINS. In ½ Gross boxes **8/-** per Gross.

TWOPENNY TINS. In Three Doz. boxes **15/-** per Gross.

"Vaseline"

REG'D TRADE MARK



Blue Seal. No. 1 size.

"Vaseline" Pure.

See Illustration.

No. 1 size, in boxes of 1 gross	18 6	per gross.
,, 1 ,, ,, 3 dozen	18 9	,,
,, 1 ,, ,, 1 ,,	18 9	,,
,, 2 size, in boxes of 1 dozen	37 6	per gross.
1-lb. tins, square, hermetically sealed	10 6	per doz.
5-lb. ,, ,,	30/-	,,
10-lb. ,, ,,	5/-	per tin.
25-lb. ,, ,,	11 8	,,
50-lb. ,, ,,	21 6	,,

Blue Seal.

"White Vaseline."

METAL CAP BOTTLES.

Blue Seal, No. 1 size	3/6	per doz.
3-oz. size in cartons, boxes of ½ doz.	6/-	,,
6-oz. size in cartons, boxes of ½ doz.	10/6	,,
1-lb. tins, square, hermetically sealed	20/-	,,
5-lb. tins, square, hermetically sealed	60/-	,,
10-lb. tins, square, hermetically sealed	9 3	per tin.
25-lb. tins, square, hermetically sealed	22/-	,,
50-lb. tins, square, hermetically sealed	41 8	,,

"Vaseline Hair Tonic."

No. 1 size	9/-	per doz.
,, 2 ,,	18/-	,,
,, 3 ,,	27/-	,,

"Vaseline Cold Cream."

Tubes, No. 1 size	4 6	per doz.
,, ,, 2 ,,	8 6	,,
No. 1 size, glass jars, in boxes of 1 doz.	3 6	,,
No. 2 size, glass jars, in boxes of 1 doz.	5 6	,,
No. 3 size, glass jars, in boxes of ½ doz.	9/-	,,
No. 4 size, nickel-plated boxes, in boxes of ½ doz.	19/-	,,

"Capsicum-Vaseline."

A perfect substitute for mustard and other plasters. Will not blister the skin. Ready for use in Tubes, one size only, 9 per doz.

"Sulpho-Vaseline."

For Dogs. The latest cure for Mange and Skin Affections in Dogs.
Blend of Pure Vaseline, Sulphur, and Rect. Oil of Tar.
In Jars, 9 3 doz.; 5-lb. Tins, 4 8 tin.; 10-lb. Tins, 8 3.

Complete Price List sent on application.

THE WORD "VASELINE" IS THE REGD. TRADE MARK OF THE

CHESEBROUGH MANUFACTURING Co.

42 HOLBORN VIADUCT, LONDON, E.C.

ESTABLISHED A.D. 1768.

ANTOINE CHIRIS,

GRASSE (FRANCE).

London Branch : 43, 44, 45 Great Tower Street, E.C.

ESSENTIAL OILS.

:: :: :: DIRECT IMPORTATION OF :: :: ::

RAW MATERIALS FOR PERFUMERS & SOAPMAKERS.

Sicily Essential Oils,
Tonquin Musk,
Ambergris, Civet,
Vanilloes, &c.

Natural Perfumes
(Solid and Liquid).
Floral Waters.
French Olive Oil.

Telgr.: "ANCHIRIS LONDON." Telephone No. 1534 LONDON WALL.

ARTIFICIAL & SYNTHETIC PERFUMES.

COMPAGNIE MORANA

Joint Stock Company,

114 SCHAFFHAUSERSTR., ZURICH, SWITZERLAND.

Specialities.

Rose, C. M.
Jacinthine, C. M.
Morana Fixateur
Tilleul
Carnation
Raldéol
Jasmin, C. M.
Musc Liquide
Musc Crystallisé
Irisol

Novelties.

Radial
Sweet Pea
Cassis (Artificial)
Capucine
Violette Verdure

Soap Perfumes.

Special Samples on application.

Latest Novelties.

Jasminal
Nerolate
Cœur de Jeanne
Suprême Parfum
Idéalone
Lily of the Valley
Musc Ambrol Liquide
Bouvardine
Rose de Dijon
Clematis

Sole Agents and Consignees for the British Isles and Colonies:

O. MURRAY & Co., Ltd., 53 Gracechurch St., LONDON, E.C.

PRICE LIST AND SAMPLES ON APPLICATION.

New Stock, 1909, now Ready for Delivery.

Shipkoff's Pure Otto of Rose.

The *test* of cheapness is *quality*—not *price*. Shipkoff's Otto of Rose is the cheapest, because it is the best Otto in the market. It is the *standard* brand—always pure and uniform and *one* quality only. Before placing your contract be sure to get Shipkoff's New Sample and Prices and try it.

ONCE TRIED, ALWAYS USED.

Highest awards at all Universal Expositions: Paris, 1889—Silver Medal.
Chicago, 1893—First Diploma and Medal of Absolute Purity.
Antwerp, 1894—The Cross and Diploma of Honour.
Paris, 1900—Gold Medal. St. Louis, 1904—Grand Prix.
Liege, 1905—Grand Prix. Milan, 1906—Grand Prix.
London, 1907—Grand Prix.

Shipkoff & Co., Distillers and Exporters of Pure Otto of Rose,
Kazanlik, Bulgaria.

London Agents:
G. P. & J. BAKER, Ltd., 9 Warwick Square, Newgate Street, E.C.

A. M. TODD CO., Ltd.

MAIN OFFICE ... ... KALAMAZOO, MICH., U.S.A.

GROWERS, DISTILLERS, AND REFINERS OF

CRYSTAL WHITE DOUBLE DISTILLED AND REFINED OIL PEPPERMINT.

This Oil is distilled from the choicest plants of True Peppermint, grown on our own farms, and is guaranteed to be the highest quality produced. We recommend its use to all manufacturers who desire to obtain the best possible results.

Packed in 10 lb. and 20 lb. Tins, and 1 lb., ½ lb., and ¼ lb. Bottles.
CORRESPONDENCE SOLICITED

Schmoller & Bompard,

Grasse, France.

Oil Almonds
Oil Geranium
Oil Lavender
Oil Neroli
Oil Patchouli

Oil Pennyroyal
Oil Rosemary
Oil Verbena
Oil Vetivert
etc., etc.

Concrete & Liquid Flower Oils
Pure Virgin Olive Oil
Pure Flower Pomades
Extracts
Floral Waters.

SOLE AGENT FOR UNITED KINGDOM: **ALFRED PAUL WHITE, 5 Water Lane, Gt. Tower Street, London, E.C.**

* * * *

CLOSING AUGUST 31st, 1909.

"Erasmic"

WINDOW DISPLAY COMPETITION.

£250 CASH PRIZES £250

BE IN TIME

FOR SPECIAL BONUS OFFER FOR DISPLAY

See full particulars in our Inset inserted in this Issue between pages 64 & 65.

THE ERASMIC CO., Ltd., WARRINGTON.

To Foreign and Colonial Buyers.

Jules Denoual & Co.

Carlton Works, Asylum Road, London, S.E.

are Wholesale and Export Agents for the Proprietors of the Celebrated

'TOINOCO Silky Fibre.'

BRAND

of Aseptic (paper) Handkerchiefs.

Awarded Gold Medal, Brighton, 1903.

"They are beautifully soft, and possess the important quality of being highly absorbent."—LANCET.

May be recommended to persons suffering from any form of infective catarrh."—BRITISH MEDICAL JOURNAL.

Dr. ALFRED HILLIER, Secretary of the "National Association for the Prevention of Consumption," writes: "I think they are most useful and essential things to have."

Packed in attractive cartons of 50, 1/0, 100 1/10; or in Patent Portable Cases, 24 small 6d., 36 large 1/-; 1 doz. 1/- cartons packed for parcel post weigh 4 lbs. 6 doz. measure 8 in. by 16 in. by 23 in.

For Trade terms see Jules Denoual & Co.'s list issued with this part.

DENTIFRICES "FRIEDERICH."

Free from Acids.

HIGHEST AWARDS AT ALL THE ÷ PRINCIPAL EXHIBITIONS. ÷



TOOTH PASTE in Glass Pots.

ON THE P.A.T.A.

8d. size, **5/3** doz.; 1/8 size, **13/-** doz.

SOLE AGENTS:

Jules Denoual & Co.

Carlton Works, ASYLUM ROAD, LONDON, S.E.

1

. THE .

Lescol Perfumery Co.

Telegrams: "VANILLIN LONDON." CAMBERWELL, LONDON. Telephone: 810 HOP.

PERFUMES.

Specialities:

— FÈDORA. NICOSIA. —
ANVĀR-KĀMA HEATHER BLOOM.
KARESME & ROYAL RED ROSE.

Quadruple Varieties:

JOCKEY CLUB,
LILY OF THE VALLEY,
PARMA VIOLET

and all other popular Odours, in 3 qualities:
Quadruple, Triple, and Extra Triple.

All Prices, ranging from 1d. carded to highest-class Cut-glass Lines and Caskets.

TOILET PREPARATIONS.

ON THE P.A.T.A. LIST.

TOOTH PASTE



TOILET CREAM

LESCOL DAMASK CREAM.
LESCOL TOILET SOAP.
LESCOL SHAVING STICK.
LESCOL SHAVING CREAM.

"THYMO-LESCOLINE" (the ideal Mouth Wash).
"DOUSALINE" (for the Complexion).
POMADE HONGROISE, &c.

Unsurpassed for Price & Quality.

. THE .

London Essence Co.

Telegrams: "VANILLIN LONDON." CAMBERWELL, LONDON. Telephone: 810 HOP.

ESSENTIAL OILS.

EUCALYPTUS (Glob.), ANISEED OIL (China Star).
PEPPERMINT, CLOVES, LEMON, SANDAL WOOD, &c., &c.

All Oils guaranteed to pass B.P. requirements. Samples & Prices on application.

ALWAYS

We have **always** supported the Chemists by putting as much of our Publicity money into their pockets, in the shape of

CASH

as we possibly could. That has always been our policy in the past, and it will be in the future. We recognise that every successful business must make

PROFITS

and we arrange the prices of our Specialities so as to secure not only the best possible value for money to the Public, but sure and satisfactory profits

TO THE TRADE.

Our Price Lists, our Publicity Programmes, have **always** been arranged with this object in view.

CASH PROFITS
TO EVERY CHEMIST STOCKING COOK'S SOAPS.

May we send you our latest Price Lists?

By Royal Warrant of Appointment,



to their Majesties the
KING and QUEEN of SPAIN.

EDWARD COOK & CO., LTD.

The Soap and Disinfectant Specialists,

BOW, LONDON, E.



FRENCH ESSENCES

(TRIPLE STRENGTH).

WE have built up an extensive Perfume trade by selecting the particular essences in which individual French manufacturers excel, and by only supplying these highest class French Essences of standard concentration to our friends.

Quality is the one thing necessary in perfumery. Regarded solely from an advertising point of view, it is the soundest of policy to be most careful when selecting perfumes.

Our French Essences are the best that money can buy. In particular, the delicate bouquet of the following will be most noticeable: PARMA VIOLET, WALLFLOWER, and LILY OF THE VALLEY.

IN 1-LB., ½-LB., AND ¼-LB. HANDSOME BOTTLES, WITH HEAVY CUT STOPPERS; A MOST ATTRACTIVE BOTTLE FOR COUNTER DISPLAY.

We have also a Special Line in 2½-oz. Bottles, similar to the above.

***SPECIAL OFFER.**—To buyers who want to test samples of the above, we shall send a small sample case **free** on application.*

EVANS SONS LESCHER & WEBB, LIMITED,

LONDON & LIVERPOOL.

K

HOLZMULLER & SCHMIDT

36 Rue de Sévigné, PARIS.

BEST SOURCE FOR

11 Pollock Street, CALCUTTA.

SIAM BENZOIN **GENTIAN** **CASTOREUM**
PATCHOULY **VANILLA** **GUM ARABIC**
SENNA LEAVES & PODS **MEDICAL PLANTS & ROOTS**
ESSENTIAL OILS: Geranium, Bay, Citronella, Lemongrass and Camphor.

LARGEST EXPORTERS OF

CARAGHEEN (IRISH) MOSS

FRANCE.—We are prepared to take charge of a few important General Agencies. Spacious Warehouses.

INDIA, BURMAH, STRAITS and SIAM.—Since 1901 yearly covered by our Mr. Emile Schmidt and our Calcutta Staff. We can represent some more really A1 concerns on commission only, and solicit correspondence.

AS SUPPLIED TO H.M. THE KING.

THE "HYGIENE" LAMP

(Patented at Home and Abroad.)

DISINFECTING OR PERFUMING



MOST ECONOMICAL IN USE.

For purifying or perfuming the air in Public Halls, Private and Business Houses, Sick Rooms, &c., and for destroying Microbes, Germs, Insects and Parasites by means of Formaldehyde Vapour.

Favourably mentioned by the "Lancet" and the "British Medical Journal," awarded the Certificate of the Incorporated Institute of Hygiene, and recommended by leading London doctors.

RETAIL PRICES.

Hygiene Lamps ... ... 5/6 each, 63/- dozen
,, Concentrated Antiseptic Fluid ... 1/- per bottle
,, ,, ,, Perfumed Fluid ... 1/6 ,,
Trade discount, 33⅓%. Orders for £1 and upwards, carriage paid in U.K. 5% allowed for cash or 2½% monthly.

Obtainable from all Wholesale Houses.

Pamphlets and showcards post free on application from Manufacturers

ROBERTS, CORNFORD & CO.
8a CITY ROAD, FINSBURY SQUARE, LONDON, E.C.

CARRIAGE FREE

CENT. PER CENT. PROFIT

Special CASH OFFER for WINDOW DISPLAY.

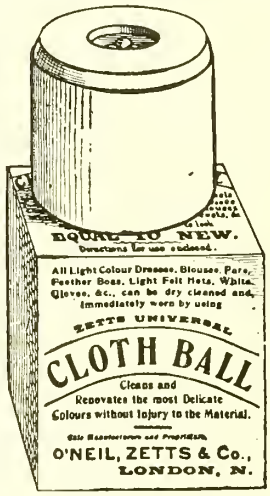
As a trial order we are prepared to send—

1 doz. 6d. size and 1 doz. 1/- size

FOR

5/3

CARRIAGE FREE.



As a trial order we are prepared to send—

1 doz. 6d. size and 1 doz. 1/- size

FOR

5/3

CARRIAGE FREE.

We print your name and address on three times the above quantity.

O'NEIL ZETTS & CO.

182 Stroud Green Road, N.

CARRIAGE FREE

IMPORTANT NOTICE
TO
CHEMISTS AND DRUGGISTS.



Messrs. A. ROWLAND & SONS, proprietors of Rowland's Macassar Oil, for strengthening the growth of the Hair; Kalydor, for beautifying the Complexion; and Odonto, for whitening the teeth and preventing their decay, have just had designed for them a new and beautifully coloured

SHOW CARD

and will be glad to send one free of cost to any Chemist or Druggist who will send his name and address.

ROWLANDS' TOILET ARTICLES have been known for the last 120 years as the purest and best preparations for the Hair, Skin, and Teeth that have ever been made. They are largely advertised all over the world, consequently there is always a regular demand for them, and they should therefore be kept in stock by all stores, chemists, and druggists.

A. ROWLAND & SONS, 67 HATTON GARDEN, LONDON.

HANSA PLATZ EAU DE COLOGNE (Johann Maria Farina)



HEAD DEPÔT FOR GREAT BRITAIN & COLONIES, F. SCHUTZE & Co., Black Bull Works, Caledonian Market, N.

WHERE ALL ENQUIRIES SHOULD BE DIRECTED. AGENCIES APPOINTED.

Unexcelled for quality and profit. Special display terms on application.

PADDLING DRAWERS	WASHING GLOVES	SWIMMING FLOATS BATHING CAPS

For Prices and Samples of all kinds of Small Waterproof Ware, apply to the Manufacturers:

F. SCHUTZE & CO., Black Bull Works, Caledonian Market, LONDON, N.

ENCOURAGE BRITISH INDUSTRIES.

WOODS'

ARECANUT TOOTHPASTE

(P.A.T.A.)

In Pots and Collapsible Tubes, 6d. and 1s. each.

SOLD BY ALL WHOLESALE HOUSES.

Special Terms for £5 from the Proprietors—

W. WOODS & SON, Chemists, PLYMOUTH.

Woods' Areca Nut Tooth Powder, containing all the properties of the Paste, in 6d. and 1s. Tins.

OKELL'S ORIGINAL MONA BOUQUET

(First introduced by the late JOSEPH O'KELL).

Registered Trade Mark, "DOUGLAS PIER."

The most popular and best-selling perfume in the market.

Retail Prices ... 1/-, 1/9, 3/6, 6/-, 7/6, 10/6 per Bottle.

ALSO 3d. SAMPLE BOTTLES.

Shippers and Wholesale Buyers supplied on the best terms by

THOMAS WEST & SON, 1187 Chester Road, Stretford. MANCHESTER

An Attractive Window pays.

READ READ

what "THE CHEMIST & DRUGGIST" says:

LAIT LAROLA. — "This little engraving represents one of the smartest arrangements for window-display that we have seen for some time. It is collapsible, measures 20 in. high by 11 in. wide, and although made of cardboard, at a distance of 3 or 4 yards it is so substantial looking as to convey the idea of the original cartons of "Lait Larola." It is just the thing to make an attractive corner in the window, on a shelf, or, indeed, in any part of the pharmacy. Any *C. & D.* subscribers who would like one should write to Messrs. Beetham & Son, Cheltenham, the proprietors of "Lait Larola."



Also Show Cards and Coloured Pictorial Postcards for distribution if desired. All the "Larola" preparations are protected at **FULL FACE VALUE,** and the goods bear a good profit.

Price List with terms sent on application to—

M. BEETHAM & SON, Cheltenham.



NEWBRO'S HERPICIDE

The ORIGINAL remedy that kills the dandruff germ.

This wonderful Hair-Saver acts by destroying the germ or microbe that causes dandruff, itching scalp and falling hair, after which the hair resumes its abundant growth and beauty as nature intended. Extraordinary results follow the intelligent use of Herpicide. Sold in all civilised countries.

Newbro's Herpicide is the most exquisite hair dressing in the world. Cooling and comforting. It stops itching of the scalp almost instantly.

Manufactured by THE HERPICIDE COMPANY, Detroit, Michigan, U.S.A.

TRADE SUPPLIED BY

THE AMERICAN DRUG STORES
Wholesale and Retail
C. BROOKS, M.P.S., Chemist and Druggist, 4 Northumberland Av., W.C.; Craven House, Kingsway, W.C.; and 36 Cranbourn St., W.C.

THOMAS CHRISTY & COMPANY
4, 10 & 12 Old Swan Lane, Upper Thames Street, E.C.

PRICES
Retail 4/ per bottle.
Wholesale 33/. per dozen.
In lots of 3 dozen, 5% discount.

W. R. TILBURY & CO.'S

IMPROVED HYGIENIC



TOOTHBRUSHES

Penetrate Everywhere.

IN THREE SIZES.

HACKNEY, LONDON



BIDWELLS'

GOLD MEDAL

TOOTH BRUSHES.

ILLUSTRATED CATALOGUE FREE ON APPLICATION.

HEAD OFFICE AND FACTORIES: AXMINSTER, DEVON.

ESTD. 1839.

AN ADEQUATE ASSORTMENT OF

CALVERT'S Specialities

enables you to supply to their full satisfaction your customers' requirements in

DISINFECTANTS, SOAPS, AND DENTIFRICES.

Illustrated Price List, free on request, gives particulars and prices of . . .

Calvert's No. 5 Carbolic Acid
and other Disinfectants prepared with it.

Calvert's Carbolic Soaps
for Toilet, Household, and Medical use.

Calvert's Carbolic Tooth Powder
and other forms of Dentifrice.

F. C. CALVERT & CO., MANCHESTER, ENG.

London Sample Rooms : 5 & 6 Australian Avenue, E.C.
Glasgow Depot : 72 Waterloo Street.
Canadian Depot : 349 Dorchester Street West, Montreal.

HAYRONNE

The Premier Hair Producer, Restorer & Preserver.

YIELDS A PROFIT OF OVER 50 PER CENT.

1/- size ... **9/-** doz. 2/- size ... **18/-** doz.
4/- size ... **36/-** doz.

All Net; Carriage Paid.

Minimum order 3 doz., any size.

SPECIAL BONUS of 2 Bottles for every dozen ordered, in return for which we ask for Counter Display.

Minimum Selling Prices: 1/-, 2/-, & 4/-.
On the P.A.T.A. List.

Please send:—
Doz. **1/-** size bottles
Doz. **2/-** size bottles
Doz. **4/-** size bottles
of "Hayronne," together with your special bonus of 2 bottles per doz.

Name.....

Address.....

MARTINÉ & CO., Hamilton House, Bishopsgate St. Without, London, E.C.

Special Offer!!!

SELLS AT SIGHT.

Our Window Display terms

Yield nearly 90% profit.

WRITE US FOR PARTICULARS.

SENIER'S



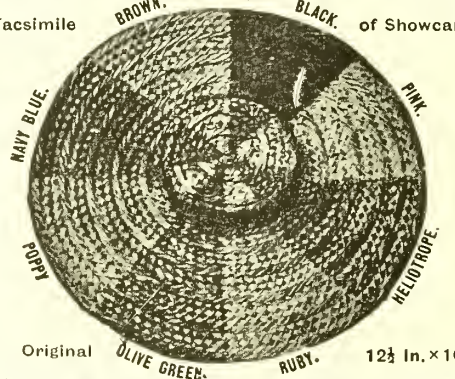
195 Seven Sisters Road, London, N.

A new Invention of Great Utility.

"LUTON" HAT DYES

No Gloss. No Polish. Dry at once. Resist rain.

Facsimile of Showcard.



In bottles, 6d. each, in separate neat cartons, with suitable brush

These Dyes are a distinct invention, dying the straw without an objectionable varnished appearance, and producing the effect of new goods.

Write for terms and patterns:

WHITAKER & CO.

Colour Works, KENDAL, ENG.

SPECIALISTS IN VARNISHES, STAINS, DYES, &c. *ESTD. 1878.*

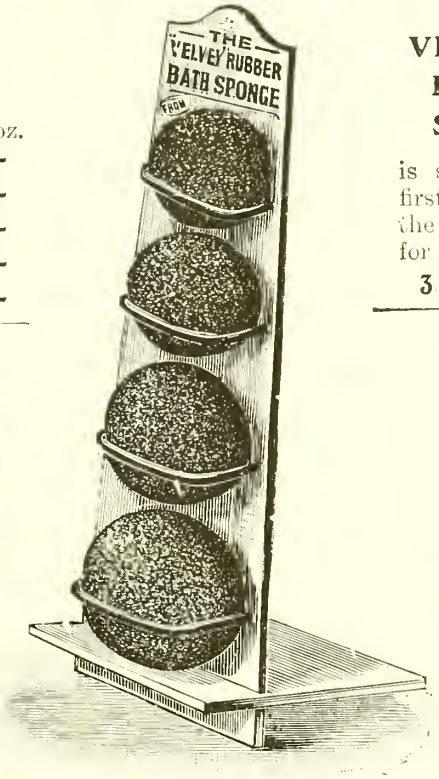
Colonial Testimonial—"Your 'Lutons' have really come up to the mark."—Geo. H. Langton, Port of Spain, Trinidad.

Rubber Sponges on Show

The Show Stand does the work, the proceeds are yours.

. . THE . .
VELVEY RUBBER BATH SPONGES.

Sizes				Per doz.
A	...	...	...	36/-
B	...	...	...	48/-
C	...	...	...	60/-
D	...	...	...	84/-
E	...	...	...	108/-



Rd.No. 541857.
Height 30 in.

. . THE . .
VELVEY RUBBER BATH SPONGE SHOW STAND

is supplied gratis with the first order for one dozen of the Bath Sponges or for 1/6 for an order of ½ doz.

3/- each without sponges.

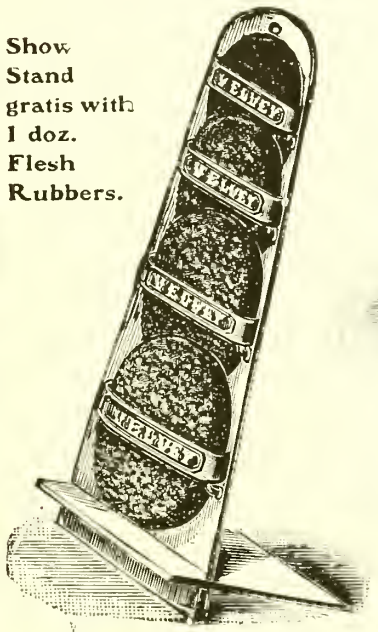


Rd.No.531420.
20½ in. high.

SPONGE SHOW STAND,
including sponges, sizes 1 to 4.

Original shape	...	17/-
Oval ,,	...	19/-

Show Stand gratis with 1 doz. Flesh Rubbers.



Rd.No.531405.
19 in. high.

VELVEY FLESH RUBBERS.

Sizes	1	2	3	4	5
Pr. doz.	13/-	15/-	17/6	21/-	24/-.

These Show Stands increase business and economise space.

They pack flat, and are made of white enamelled wood.

From the leading Wholesale Houses, or from

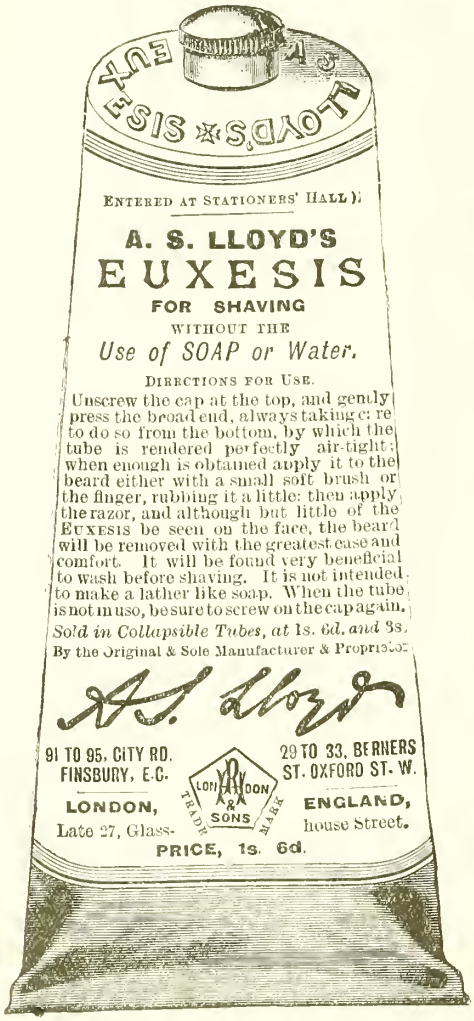
H. A. WANKLYN, 17 Manchester Avenue, Aldersgate Street, LONDON, E.C.

Telegraphic Address: "WANKLYN LONDON." Telephone No.: HOLBORN 2553.

A. S. LLOYD'S EUXESIS

(THE GENUINE.)

For Shaving without Soap, Water, or Brush.



Sold by all Perfumers and Chemists throughout the World.

R. HOVENDEN & SONS having purchased, under an administration suit, the Business of the late A. S. LLOYD, with the Receipt, Trade-mark, and Goodwill of the celebrated Euxesis, the Trade are cautioned that the original and genuine Euxesis is now manufactured at our Factory ONLY, and may be obtained at either of our Warehouses at the following prices:

10/- *per dozen*, 9/6 *by the* 3 *dozen*, 9/- *by the* 6 *dozen.*
Retails at 1/6 *the Tube;* 3 - *size to order.*

NOTICE.—THE GENUINE A. S. LLOYD'S EUXESIS bears a label printed in BLACK only on a Yellow ground, with our Trade Mark at the bottom, as illustration.

Proprietors: **R. HOVENDEN & SONS,** LIMITED,
29-33 Berners Street, W.
and 89-95 City Road, E.C., LONDON.

Every Woman and Girl

NEEDS THE

ARTIFEX

SOFT RUBBER HAIR WAVER AND CURLER

The only Hair Waver and Curler entirely without metal, bone, or other hard substance

Advertised by us to retail at 1/- per set. Trade price 7/- per box of 1 doz. sets. Business always brisk. Instructions for use in all languages.

Artistic Showcards free. Electros sent free.

Stocked by all the leading Wholesale Houses, including the following:—**LONDON: Barclay & Sons, Ltd.; Francis Newbery & Sons, Ltd.; R. Hovenden & Sons, Ltd.; May, Roberts & Co; Sangers, Ltd. MANCHESTER: Single, Dalby & Co.; Watts Bros YORK: Bleasdale, Ltd.**

CONTINENTAL AGENTS.—Vienna: Maison Pessl, Kartnerstrasse 28. Warsaw: L. Burghardt, Perfumerie. Germany: Hermann Meyer, Kopfhausstrasse, 4 Colmar. Lisbon: Robert & Robert, 32 Rua Nova da Trinidadi, 34. Madrid: Louis Poujade, Glorieta de Atocha 8. Milan: Arturo Guzzi, 17 Via tre Alberghi. Christiania: D. Steen.

Sole Licensees and Manufacturers—

THE MERKHAM TRADING CO., Ltd. (Dept. C),
LONDON.

Add a new source of income to your business by taking up

Laurence's

ONE-SOLUTION

Hair Dye

In nine shades — Raven Black, Black, Dark Brown, Brown, Medium Brown, Light Brown, Golden Brown, Auburn and Chestnut.

THE BEST ON THE MARKET.
ABSOLUTELY RELIABLE.

Shows over 100 per cent. profit.

Can be supplied under Chemist's own title if preferred, and exclusive design of carton and label reserved in any one town.

Write at once for particulars to—

C. R. HARKER, STAGG & MORGAN LTD.,
Devon Wharf, Emmott Street,
MILE END, LONDON, E.

A. S. LLOYD'S EUXESIS.

For Shaving without Soap, Water, or Brush.

CAUTION.

The Labels on genuine EUXESIS bear signature of A. S. LLOYD in BLACK INK, and that of his Widow, AIMÉE LLOYD, in RED INK. Refuse any other.

Sole Manufacturers and Proprietors: **AIMÉE LLOYD & CO.**

3 SPUR STREET, Leicester Square, LONDON, W.C.

N.B.—When ordering from Wholesale Houses write LLOYD'S EUXESIS (WIDOW'S).

Gillette

Safety Razor

No Stropping. No Honing.

Known the world over.

SOLD BY ALL WHOLESALE DRUG & DRUGGISTS' SUNDRIES HOUSES & HAIRDRESSERS' SUPPLY HOUSES.

Gillette Safety Razor, Ltd.
17 Holborn Viaduct, London, E.C.

S.V.M.

Best Quality Only.

RANDALL & SON,

Limited.

Wholesale and Export Druggists,

SOUTHAMPTON

TRY IT IN YOUR BATH

BY APPOINTMENT TO H.M. THE KING.

SCRUBB'S AMMONIA

MARVELLOUS PREPARATION

Refreshing as a Turkish Bath. Invaluable for Toilet Purposes.
Splendid Cleansing Preparation for the Hair. Removes Stains and Grease Spots from Clothing.
Allays the Irritation caused by Mosquito Bites. Invigorating in Hot Climates.
Restores the Colour to Carpets. Cleans Plate and Jewellery. Softens Hard Water.

Of all Chemists, Etc. Price 1s. per Bottle.

SCRUBB & CO., LTD., GUILDFORD STREET, LONDON, S.E.

THE ONLY GENUINE

JAVA POWDER

BOURJOIS, PARIS.

Prices ... ... { 1 doz., 7/-; 6 doz., 6/9 / 9 „ 6/6; 24 „ 6/3

IN FOUR COLOURS,



Blanche, Naturelle, Rose, Rachel.

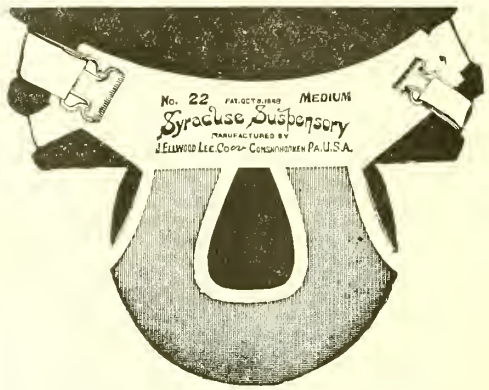
Minimum Retail Price 8½d. per Box.

BOURJOIS BRILLIANTINE.

617 is the best value in the market ... 7/- doz.

HENRY C. QUELCH & CO., 4 Ludgate Sq., London, E.C.

SYRACUSE BANDAGES



Made in Three Sizes—Small, Medium, and Large.
The Best to Stock. In demand everywhere.

		£ s. d.
10. Cotton sack, non-elastic band ...	...per doz.	0 7 3
16. Deimel linen mesh, non-elastic band ...	„	0 13 3
21. Deimel linen mesh, elastic band ...	„	1 0 0
22. Stockinette sack, non-elastic band ...	„	1 0 0
26. Bolting silk sack, elastic band ...	„	1 6 6
27. Silk sack, open weave, elastic band ...	„	1 6 6
28. Fine silk sack, cotton elastic band ...	„	1 6 6
31. Fine silk sack, special weave, elastic band ...	„	1 13 3
32. Fine silk sack, special weave, silk band ...	„	2 0 0
34. Fancy silk sack, ventilated, satin finish, silk elastic band	„	2 13 0

HENRY C. QUELCH & CO., 4 Ludgate Sq., London, E.C.

Telegraphic Address: "CRESSWELL LONDON."] *WORLD'S HEADQUARTERS FOR* [Telephone No. 1432 HOLBORN.

International Sponge Importers, Limited,

SPONGES CRESSWELL BROTHERS & SCHMITZ,

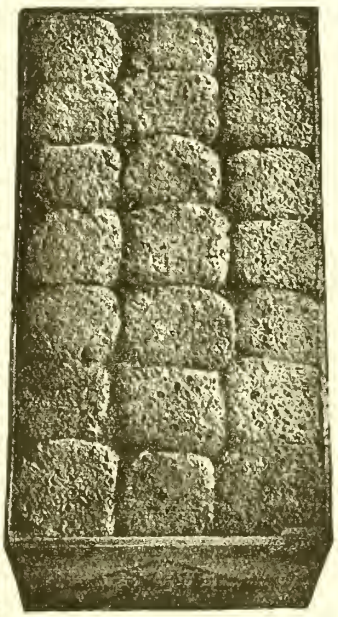
Sponge Importers, Exporters, & Merchants, [BRANCH
and Chamois Leather Dressers.

18 & 19 RED LION SQUARE, New Warehouses and Steam Bleacheries, 45½ EAGLE STREET, **LONDON, W.C.**

175 Rue du Temple, PARIS; Piazzetta Barisone 73, GENOA; and Leyendeckerstrasse 13, COLOGNE, EHRENFELD.

The following abridged List will serve as a guide to Buyers when ordering.

UNBLEACHED MEDITERRANEAN SPONGES IN ORIGINAL CASES.



HONEYCOMB. Toilet & Bath. 1st Qualities. Pieces in Case.	Average Price per Piece.
300 at	4½d.
270 ,,	6d.
200 ,,	8d.
180 ,,	9d.
170 ,,	1/-
160 ,,	1/2
160 ,,	1/6
150 ,,	1/9
140 ,,	2/-
140 ,,	2/6
125 ,,	3/-
110 ,,	3/6
95 ,,	4/-
90 ,,	4/6
80 ,,	5/-
75 ,,	5/6
70 ,,	6/6

HONEYCOMB. 2nd Shape, Toilet & Bath. Largest Sponges obtainable at the prices. Pieces in Case.	Average Price per Piece.
330 at	2½d.
300 ,,	3½d.
280 ,,	4½d.
250 ,,	6d.
200 ,,	8d.
180 ,,	9d.
160 ,,	1/-
140 ,,	1/3
120 ,,	1/6
100 ,,	1/9
90 ,,	2/-
80 ,,	2/6
60 ,,	3/-
45 ,,	4/6
30 ,,	5/-

FINE TURKEY CUPS 1st Quality. PICKED SHAPES. Pieces in Case.	Average Price per Piece.
Toilet Selected 300 at	1/-
,, 250 ,,	1/3
,, 200 ,,	1/6
,, 175 ,,	1/9
,, 150 ,,	2/-
,, 140 ,,	2/6
,, 100 ,,	3/-
,, 90 ,,	3/6
,, 80 ,,	4/-
,, 70 ,,	4/6
,, 60 ,,	5/-
,, 50 ,,	6/-
Bath Selected 45 ,,	6/6
,, 40 ,,	7/6

FINE TURKEY CUPS. 2nd Quality. LARGE FOR MONEY. Pieces in Case.	Average Price per Piece.
Toilet 300 at	9d.
,, 250 ,,	1/-
,, 200 ,,	1/3
,, 180 ,,	1/6
,, 150 ,,	2/-
,, 120 ,,	2/6
,, 90 ,,	3/-
,, 80 ,,	3/6
Bath 70 ,,	4/-
,, 60 ,,	4/6
,, 50 ,,	5/6

FINE TURKEY SOLIDS. SELECTED SHAPES. 1st Quality. Pieces in Case.	Average Price per Piece.
Nursery 400 at	3d.
,, 300 ,,	4d.
,, 200 ,,	6d.
,, 200 ,,	8d.
,, 200 ,,	1/-
Toilet 150 ,,	1/6
,, 100 ,,	1/9
,, 100 ,,	2/-
,, 80 ,,	2/6
Bath 50 ,,	3/-
,, 36 ,,	4/-
,, 24 ,,	5/-

LOOSE GOODS DEPARTMENT

where Honeycomb, Turkey, and Cuban Sponges are sold in smaller quantities to suit customers' requirements. Large and varied selections always on show at lowest market price.

SPECIAL NEW LINES OF THE SEASON:

SPONGES in Fancy Card Boxes for Counter Display.



SELECTED FINE CUBAN.

For Nursery and Toilet uses.

		Per Box
AA.	Round Solids, containing 24 pieces	1/6
A.	,, ,, ,, 12 ,,	1/6
B.	,, ,, ,, 12 ,,	2/6
C.	,, ,, ,, 12 ,,	3/6
D.	,, ,, ,, 12 ,,	4/6
E1.	,, ,, ,, 12 ,,	6/-
E2.	,, ,, ,, 12 ,,	9/-
E3.	,, ,, ,, 6 ,,	6/-

SPECIAL LINE CHEAP CUBAN.

Half forms, large sponge for money.

HC 1.	Half Shapes, 8 dozen in Box	12/-
,, 2.	,, 5 ,, ,,	12/6
,, 3.	,, 3 ,, ,,	10/6

NEW ANCLOTE HONEYCOMB.

Velvet Quality. Very soft and Durable, for Toilet and Domestic use.

01.	Large for money, 36 pieces.	9/-
02.	,, ,, 24 ,,	8/-
03.	,, ,, 24 ,,	12/-
04.	,, ,, 24 ,,	18/-
05.	,, ,, 12 ,,	12/-

The above Lines can be had Bleached or Unbleached.

NEW FINE ANCLOTE.

For Toilet and Bath, exquisitely soft—very durable.

No. 20.	Containing 36 pieces, uniform size	9/-
,, 21.	,, 24 ,, ,,	8/-
,, 22.	,, 24 ,, ,,	12/-
,, 23.	,, 24 ,, ,,	18/-
,, 24.	,, 24 ,, ,,	24/-

SELECTED CUBAN GRASS SHAPES.

1st quality for Toilet use, in Artistic Cardboard Boxes.

G. S. 80	Selected Shapes, 12 pieces	at 1/6 per Box.
81	,, ,,	,, 2/0 ,,
82	,, ,,	,, 2/6 ,,
83	,, ,,	,, 3/0 ,,
84	,, ,,	,, 3/6 ,,
G. S. 85	Selected Shapes, 12 pieces	at 3/6 Per Box.
86	,, ,,	,, 4/6 ,,
87	,, ,,	,, 6/- ,,
88	,, 6 pieces	,, 4/6 ,,
89	,, ,,	,, 6/- ,,

All Orders and Communications for this Branch to be addressed to 18 & 19 RED LION SQUARE, LONDON, W.C.

G. B. KENT & SONS, LTD.

Offices and Warehouses: 75 FARRINGDON ROAD, E.C.

Registered Telegraphic Address: "TRICHO LONDON." Telephone Nos. 1407 and 4116 Central.

Steam Factories: ROBINSON ROAD, VICTORIA PARK, E.

Telephone No. P.O. Central 4116.

And River Gade Factories, HEMEL HEMPSTEAD, HERTS.

Dublin Branch: 63 WILLIAM STREET.

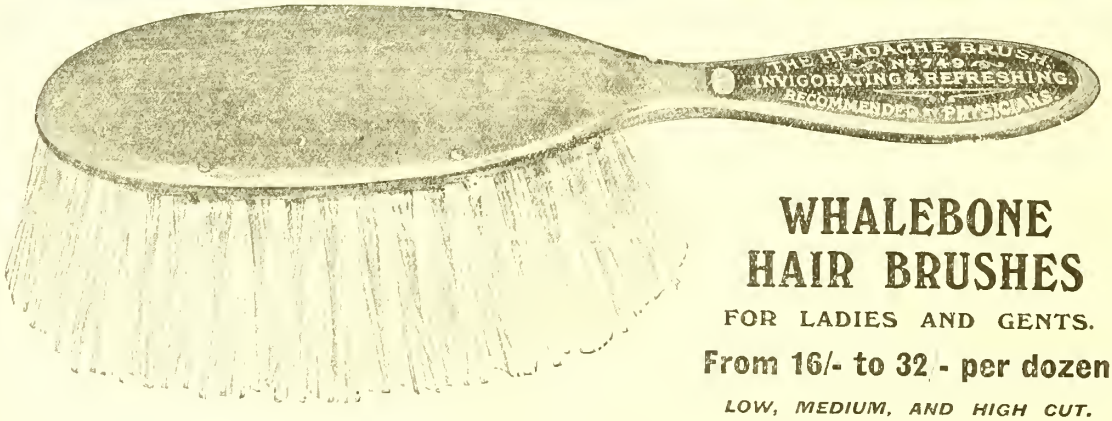
Estd. 1777.

TRADE 

MARK.

Incd. 1900.

Australasian Agents:
Messrs. FRANCIS FORREST & CO., 495 & 497 Bourke Street, Melbourne.
Canadian Agents: Messrs. LYMAN, LIMITED, Montreal.
South African Agency: Mr. C. F. COCKSEDGE, P.O. Box 422, Capetown.
Agency in India, Burmah and Ceylon:
Mr. WM. MOORE, c/o Messrs. Grindlay, Groom & Co., Bombay.
Agent in China, Japan, and the East: Mr. R. PESCIO, c/o Thos. Cook & Son, Colombo.
Agent in the West Indies: Mr. F. N. MARTINEZ, Barbados.
United States Agency: Messrs. McKESSON & ROBBINS, 91 & 93 Fulton Street.
Agent in Havana: Mr. CARLOS BOOTH, Obrapia, Numero 25.
Paris Agency: MM. PITET, Ainé et Cie., 51 Faubourg Poissonière.
Brussels Agency: La Parfumerie, anc. MAISON NORBERT DEKEYN.
49 Rue Fossé aux Loups.
Agent in the River Plate: Mr. WM. BURMESTER, Calle Bolivar 240, Buenos Ayres.
Agent in Egypt: Mr. VASCO BIGIAVI, P.O. Box 249, Cairo.
Agent in Russia: S. LEVENTIS, Rue de Ribas, Maison Ellman, Odessa.



WHALEBONE HAIR BRUSHES

FOR LADIES AND GENTS.

From 16/- to 32 - per dozen.

LOW, MEDIUM, AND HIGH CUT.

THE CHEMIST & DRUGGIST SUPPLEMENT.

OFFICE: 42 CANNON STREET, E.C. SATURDAY, JULY 31, 1909.

PUBLISHER'S NOTICE TO ADVERTISERS.

Advertisers are desired to take note that the advertisements of Businesses for Disposal and Wanted, Situations Open and Required, Exchange Column, &c., belong to the **PREPAID CLASS, and to ensure the due insertion of the announcements the remittances must accompany the instructions.** A great amount of unnecessary correspondence is occasioned by the non-observance of this regulation, and the Publisher hopes that the advertisers will assist in the quick preparation and despatch of the Supplement by strictly observing this rule. Advertisements for the current issue cannot be received after 4 p.m. on Thursday in each week.

A Copy of this Supplement is inserted in every Number issued of "The Chemist and Druggist."



SMOOTH THE WAY

for success in life by advertising in this Supplement.

IT PAYS TO PAY FOR ADVERTISING HEREIN

CHEMISTS' TRANSFERS.

Messrs. ORRIDGE & CO., 56 Ludgate Hill, E.C.

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

1.—KENNINGTON.—Ready-money Business; Retail and Prescribing; returns exceed £600 per annum; *profit* (*net*) £200; attractive window; excellent position; satisfactory reason for disposal; price £400; inspection invited.

2.—LONDON (Northern Suburb).—Modern Pharmacy; returns last year £860, increasing; *gross profit* £250; handsomely-fitted shop; corner position; good residence; held on lease; price £600.

3.—LONDON, W.—Attractive Pharmacy; returns between £2,000 and £2,500 per annum, *at good prices*; intending investors with about £1,800 at command will find this a good investment.

4.—LONDON, S.W.—Old-established Business; situate in close proximity to busy railway station; returns between £1,200 and £1,300 yearly; scope for development; vendor retiring; price £1,000.

5.—LONDON, E.C.—Retail and Dispensing Business; excellent position; attractive shop; single fronted; *net profit over* £400 *yearly*; proof given; further details on application.

6.—LEWISHAM.—Neglected Business; main thoroughfare; returns £600 yearly; formerly about £1,100; roomy shop; corner position; immediate sale desired; no reasonable offer refused.

7.—LONDON, S.E.—Good middle-class Business; Retail, Dispensing, and Photographic; established 50 years; returns last year £700; *net profit* £245; large shop, fitted in mahogany; commanding window; comfortable house; pleasant garden; held on lease; valuation, about £350.

8.—WORCESTERSHIRE.—Old-established Business; Retail and Dispensing, with excellent sale for own Proprietaries; the shop has double front, and is situate in the centre of town; roomy house; garden and warehouse; terms, goodwill £228, stock and fixtures at valuation.

9.—WEST OF ENGLAND. Very old-established Business; returns average £1,000 per annum; *gross profit* £400; investigation invited; price £800, less than the valuation of stock and fixtures.

10.—GT. WESTERN Main Line.—Dispensing and Photographic trade; *gross* receipts average between £60 and £70 per month; *net profit* £200 *yearly*; roomy house; held on lease; about the value of stock and fixtures required.

11.—GLOUCESTER (within easy distance of).—Dispensing and Retail Business, producing a *net income of about* £350 *yearly*; for immediate disposal; attractive shop and well-appointed house; further details on application.

12.—EASTERN COUNTY.—Mixed Business; entirely unopposed; returns £1,115; *net profit* £250; double-fronted shop, good residence; garden; rent £35; price £450; part may remain, say £150.

13.—CORNWALL (Market Town).—Retail and Dispensing Business; all good-class trading; returns exceed £1,400 yearly; scope for development; terms, lease and goodwill £50, stock and fixtures at valuation.

14.—SUSSEX (Health Resort).—General, Retail, and Dispensing Business, situate in the centre of town; gross receipts about £1,200 yearly; *net profit* 25 *per cent.*; terms £60 and valuation of stock and fixtures; part payment if desired.

Particulars of any of the above will be furnished on application.

N.B.—NO CHARGE TO PURCHASERS.

VALUATIONS FOR STOCKTAKING.

Messrs. O. & Co. desire to emphasise the necessity of a Periodical Statement of Account, by which means alone **Profit, the value of Business, &c.,** can be determined. Involving as this does the labour of Stocktaking and Valuation, it is often omitted, and eventually becomes the cause of **confusion and loss.**

Messrs. O. & Co. are prepared to undertake these essential duties, and will make **Special Terms** for such services.

ORRIDGE & CO., 56 LUDGATE HILL, LONDON, E.C.

BRETT & CO.

CHEMISTS' VALUERS AND TRANSFER AGENTS,

Telegrams: "Brett Leicester."] ***8 WEST STREET, LEICESTER.*** Telephone: 160 Y.

VALUATIONS have always had our special and personal attention, and an experience of thirty years is at your disposal **AGENCY.**—We have always a large number of *Buyers* on our books, and we can frequently find a Purchaser at once. We also have a *Private Register* for vendors who are in no hurry to sell and who do not wish their businesses to be advertised.

STOCKTAKING SPECIALISTS TO THE ENTIRE DRUG TRADE.

DEVON.—Good-class Light Retail and Dispensing; old-established; very nice convenient house and large garden; returns nearly £1,000; net profit over £300; valuation, about £850; part can remain; low rent; an excellent opportunity.

LANCS (NORTH).—Very good Country Retail, Agricultural, and Photo, in a pretty district; quite unopposed for miles; very nice house and good garden (fruit trees); returns £850; net profit £250; stock and fixtures at valuation; very old established; a rare chance.

YORKS (on the borders of Lancs).—A very nice General Retail, with splendid sale of own Proprietaries; good house and large shop; returns under manager £925; very profitable; price £50, and stock and fixtures at valuation; good business to be done in Optics.

MIDLANDS.—Good profitable Retail and Drysaltery, Oils, Paints, etc.; death vacancy; price, valuation, about £1,200.

YORKS.—General Light Retail, Dispensing, and Prescribing; fine position in busy town; returns £1,100; price £650; can be greatly increased.

SOUTH COAST.—Good General Retail Drug-store; returns as branch £1,200; net profit £290; price £60 and valuation; an excellent opportunity.

CAMBS.—Unopposed Mixed General Country Retail and Agricultural; returns £1,100; very profitable; accept low figure of £450; a rare chance.

LANCS.—High-class General Retail, in popular seaside resort; returns £1,000; stock and fixtures at valuation, about £750.

LANCS.—General Light Retail in busy manufacturing town; nice shop; main street; low rent; returns £1,200; profitable; price about £550, or valuation; splendid opportunity.

LANCS.—General Light Retail with Photo and Optics, in good position main street of very busy town; returns £730, and increasing; valuation, about £450.

HERTS.—Good-class Family Retail and little Photo; good shop; nicely fitted; low rent; returns £700; net profit about £200; price £400; genuine; chance seldom occurs.

MANCHESTER (Suburb).—Prescribing and General Retail; great scope for up-to-date man; returns about £10 per week, and can be greatly increased; nice shop, and well fitted; price £150, or offer; a great bargain.

DERBY.—Mixed General Retail in busy thoroughfare; nice corner shop; returns £400; has done much more, and can again with attention; price, valuation, about £200.

LONDON, S.E.—Family, Prescribing, and Dispensing; fine opening for Photo and Optics; very nice house and shop; returns £523; price £175, or reasonable offer.

LONDON, N.—Very nice General Retail in main road; handsomely fitted and well stocked; low rent; price £250; only wants seeing.

LONDON, N.—Mixed General Cash Retail, with good sale of own Preps.; healthy locality; good house and premises; returns £500; price £200.

YORKS.—Good Country Mixed Retail, Prescribing, Photo, etc.; no qualified opposition; double-fronted shop; excellent premises; old established; returns £700; price £230; a bargain.

WORCESTERSHIRE.—Light Retail with valuable Proprietaries; nicely fitted shop; returns £500; net profit £160; price, valuation, about £300; can easily be doubled with energy.

YORKS.—Mixed Country Business; nice house and shop; returns £550; price £250; capable of being greatly increased.

DERBYSHIRE (Inland Health Resort).—High-class Dispensing, doing £800 under manager; very profitable; valuation, about £650; fine house and shop.

MIDDLESEX.—Light Retail, Dispensing, Prescribing, and Photo; double-fronted shop; large house; moderate rent; returns £700; net profit £200; price about £550; splendid opportunity.

MIDDLESEX.—Dispensing, Prescribing, and Light Retail; Photo and good Specialities; returns £600; very profitable; price £250, much less than value of stock and fixtures; low rent.

Messrs. BERDOE & FISH,

Chemists' Valuers and Transfer Agents,

35 JEWRY STREET, FENCHURCH STREET, CITY.

TELEPHONE: 1809 CENTRAL.

BUSINESSES FOR DISPOSAL.

The whole of those mentioned in our last week's advertisement are **still for sale**; full particulars sent on application.

VALUATIONS for SALE, PURCHASE, or STOCKTAKING.

The chief and most essential point to consider in selecting your valuer is to make absolutely sure that the one you engage is thoroughly conversant with every detail which governs **"Value,"** namely, an expert—one who is able to tell at a glance what is **good stock** and what is **bad,** what is **saleable** and what is **unsaleable.** Also be sure he knows the value of **fixtures** and **fittings** This knowledge is only gained after **long and varied practical experience,** and in securing the services of such a valuer you may rest assured that your interests will be looked after to the best possible advantage.

Messrs. BERDOE & FISH have been solely engaged in this work since 1870, and every valuation entrusted to them is personally conducted and priced out by a member of the firm. You pay for experience; see that you get what you pay for. If you employ us you do so.

BUSINESSES WANTED.

We have clients unsuited requiring businesses returning from £800 to £3,000, and they are willing to pay cash. Terms sent on application. Correspondence invited.

J. G. BERDOE established the firm in 1870, and W. S. FISH was apprenticed to him in 1877.

PARSON C. BAKER

174 VICTORIA ST., LONDON, S.W.

Recommended by—MESSRS. BARRON, HARVEYS & CO.
Telephone: MESSRS. MEGGESON & CO.
No. 27 Victoria. MESSRS. BARCLAY & SON, LTD.

VENDOR, having received appointment in India, desires quick sale; returns £600, steadily increasing; rent £30; border of Epping Forest; very profitable; part can remain; offer, or valuation if desired.

THIRTY Miles out.—Increasing trade, now £700; good prices; rent £48; well-fitted shop, fully stocked, and good house, etc.; valuation terms, say £350 (about).

LONDON.—Old-established first-class, full-price Cash Retail; capital required £1,500; full particulars on application; freest investigation; net profit £400.

HAMPSTEAD (best position good thoroughfare).—Returning £800; double-fronted, well-fitted shop; price £200; part can remain.

SOUTH COAST.—Returns £1,100; lock-up shop; good prices; £500.

BATTERSEA (Principal Thoroughfare).—Death Vacancy.—Good house and shop; rent £70; first-class opening for large cash trade; first offer, or valuation stock and fixtures.

W. J. ROGERSON,

(late Director Messrs. Hearon, Squire & Francis, Ltd.)
will be glad to undertake
Valuations for Transfer of Business, Probate, Stocktaking, &c.
Terms reasonable. Distance no object.
Address—
RYECROFT, BOROBRIDGE ROAD, KNARESBOROUGH.

FREDK. WM. SMITH,

LICENSED CHEMISTS' VALUER.

Valuations for transfer of business, Probate, &c. Businesses for disposal. Stocks and Fixtures purchased to any amount for cash. Stocktakings undertaken. A Register kept of Assistants and Chemists requiring Assistants; no charge made

3 Belgrave Terrace, LEEDS
TELEPHONE 02949.

TOMTOM

Telegraphic Address.
THOS. TOMLINSON & SON,
Chemists' Valuers and Expert Stocktakers,
Businesses transferred privately.
"89 NEW CANNON STREET, MANCHESTER."

We desire particularly to draw the attention of Colonial and Foreign Subscribers to the fact that in cases where they require partners, agents, or assistants, or wish to sell their businesses, an advertisement in this Supplement, placed in every copy of "The Chemist and Druggist," should be the readiest means of helping them to attain their object. The tariff for such announcements is given under the appropriate headings in the Supplement. Instructions and remittances can be sent to us direct or through the advertisers' correspondents in this country.

BUSINESSES FOR DISPOSAL.

3s. 6d. *for* 50 *words or less; 6d. for every* 10 *words beyond, prepaid.*

NOTE.—Replies can be addressed to this Office and forwarded to the Advertiser for an Additional charge of 6d.

COLONIAL BUSINESSES.

We call the special attention of our Colonial subscribers to the opportunity this Supplement affords when they wish to dispose of their Businesses, of getting into touch with likely buyers either at home or in the Colonies.

Replies to Advertisements may be addressed to this Office and forwarded to the Advertiser for an additional charge of 6d. Trade circulars and samples can in no case be forwarded.

BLACKPOOL.—Profitable old Business for Disposal on valuation terms; main thoroughfare; returns £1,000; lease. Apply, 138/39, Office of this Paper.

BUCKS.—Old-established Country Retail Business, with good Proprietaries, in growing neighbourhood and health resort; double-fronted, large shop, well stocked; electric light; large garden and house; easily worked single handed; returns (last year £950) show an increase for the last 6 years; price £700; on lease. 143/19, Office of this Paper.

CHELTENHAM (Health Resort and Educational Town).—For Disposal, good-class Light Retail, Proprietaries, Dispensing, and Photographic Business; central position; modern mahogany mirrored fittings; York Glass recess-labelled bottles; gas, electric light; good house; perfect sanitation; private door; capital required about £750; lease; wishes to retire from Chemist business. Apply, Arthur Hill, Chemist and Dentist, 98 High Street, Cheltenham.

DEVON.—Old-established Retail Dispensing Business in rising seaside place and ideal health resort; steadily-increasing returns; good profits; no heavy work; short hours; satisfactory reasons for disposal. Particulars from "Salubrious" (141/23), Office of this Paper.

DORSET.—Good-class Country Business in small market town; old-fashioned prices; very few Patents; no Side-lines or heavy trade; small house and shop; in best position; net profit £300; an exceptional chance for anyone requiring an easily worked business, as nearest opposition is 10 miles; price £450; no agents. 142/10, Office of this Paper.

EDINBURGH.—Improving Retail and Dispensing Business for immediate Sale; good position in busy thoroughfare; splendid opening for Photography and Optics, being no near opposition; satisfactory reasons for disposal. 141/27, Office of this Paper.

LANCASHIRE.—Moderate rental and rates; electric light; Wine Licence; well situated, with good shops other trades in block; only needs energetic and resourceful man to make great success; incoming moderate, about £350. Apply, "Spes," c/o Evans Sons Lescher & Webb, Ltd., Liverpool.

LANCASHIRE.—A bargain; must Sell through ill-health; returns average £500; net profit £200; old-established business, principal street; population 20,000; Drugs and Proprietaries; few Patents; a little Extracting; £320 or valuation; fullest investigation courted. "Rhei" (141/14), Office of this Paper.

LIVERPOOL.—For Disposal, owing to death, old-established Retail Business; excellent position; good opening; few Patents; £300. Ayrton, Saunders & Co., Ltd., 34 Hanover Street, Liverpool.

LONDON, S.W.—Excellent high-class Dispensing and Retail Photographic Business; rapidly-growing neighbourhood; best prices; returns last year averaged £500 per annum; price £500; fine chance for young energetic man. Apply to "Suburb," c/o Messrs. Evans Sons Lescher & Webb, Ltd., 60 Bartholomew Close, London, E.C.

LONDON SUBURB.—Light Retail, Prescribing, and Dispensing Business for immediate Disposal; situated opposite tram terminus; unique opportunity for Dentistry and Optics; large shop with mahogany fittings; full investigation solicited; price £200, of which part can remain. Apply, 139/24, Office of this Paper.

LONDON SUBURB, W.—Profitable Cash Business; returns under Manager £400; compact, well-stocked shop; good house; rent £40; good chance for young energetic man; introduction given; price £160; less than valuation. Apply, 140/29, Office of this Paper.

NOTTINGHAM.—Very profitable, old-established Business with house attached; rent £50 (part let); doing £6 to £7 weekly under manager; next to no Patents; good stock; main road; valuation £160. Apply, "Q. T." (142/5), Office of this Paper.

S.W.—A small Chemist's Business in increasing neighbourhood; double-fronted corner shop, fitted electric light; main road; healthy 7-roomed house, and fine district; rent £45; agreement or lease; average £600 per annum; no reasonable offer refused; good reason for disposal. 143/34, Office of this Paper.

WESTON-SUPER-MARE.—Progressive Business in main street; returns rapidly increasing and capable of great extension. Full particulars on application to "W.-S.-M." (140/34), Office of this Paper.

BUSINESSES FOR DISPOSAL
(continued.)

HEALTH Resort, county town and yachting station (North Wales); high-class old-established Dispensing, Optical, and Retail; excellent and annually increasing connection; only one opposition in town (unqualified), and for a distance of several miles; owner leaving country; low price to dispose before summer season; good premises; low rent. "Alpha" (142/22), Office of this Paper.

LIGHT Retail, Prescribing, and Dispensing; modern shop; attractive neighbourhood; well stocked; returns last year £700; good house; small garden; lease and goodwill £50; stock and fixtures at valuation. Apply, "George" (140/5), Office of this Paper.

TWO Chemist-Opticians.—Exceptional opportunity to acquire an established Business at a small figure; situate in central position in populous Lancashire town; well-fitted Pharmacy; electric lighted; good living accommodation; investigation invited; bargain for prompt settlement. J. A. Wilson, Pharmacist, Chorley.

TWO small Businesses for immediate Sale, together or separate; returns £350 and £600; exceptionally profitable; Patents almost nil; could be greatly increased with a little extra capital; accept part cash and balance by arrangement; prices, valuation (about £200 and £400). "Ozonia" (140/28), Office of this Paper.

WELL-FITTED, fully-stocked Pharmacy; Eastern Counties; doing £12 to £15 per week; well placed on main road; good sale for own Proprietaries; excellent opening for Dentistry; ill-health cause of sale; £225 (about value of stock and fittings); curiosity applications not wanted. 142/23, Office of this Paper.

£250; very rapidly-growing district; returns £430 (all cash); profitable; few Patents; great scope for increase; opening for Agricultural and Optics; low expenses; long and favourable lease; convenient house; death of relative necessitates sale; chance for beginner; bears strict investigation; Southern county; only wants seeing; no agents. "Genuine" (142/7), Office of this Paper.

BUSINESSES WANTED.

ADVERTISER, with £250 capital, wishes to hear of a Business in which to place same with view to succession; trained in best Family Dispensing businesses, Agricultural, Optical, and Photographic. "Pharmacist" (139/36), Office of this Paper.

GENUINE small Business wanted; price about £200; Eastern Counties preferred, but not essential; £150 cash and remainder by arrangement; garden desirable. Fullest particulars to "Eastern" (142/11), Office of this Paper.

WANTED, middle to good class Business in main shopping thoroughfare within 50 miles of London, in growing district; capital available £300; advertiser will give £3 to introducer of a district, if chosen, where business as above could be opened. Replies, 140/2, Office of this Paper.

WANTED, a good-class Business; London suburb preferred; returns from £750 to £1,500. Full particulars (in confidence), "T. H. R." (139/40), Office of this Paper.

WANTED, a good-class Business returning £1,000 or over for cash. "Business" (140/1), Office of this Paper.

WANTED, immediately, for prompt cash, a Business returning from £500 to £1,000 on the Cornish, Devon, Somerset, or Dorset coast; this is not a curiosity advertisement, and if the right thing is offered business will result. All replies (in strict confidence) to "Statim," 48 Peverell Park Road, Plymouth.

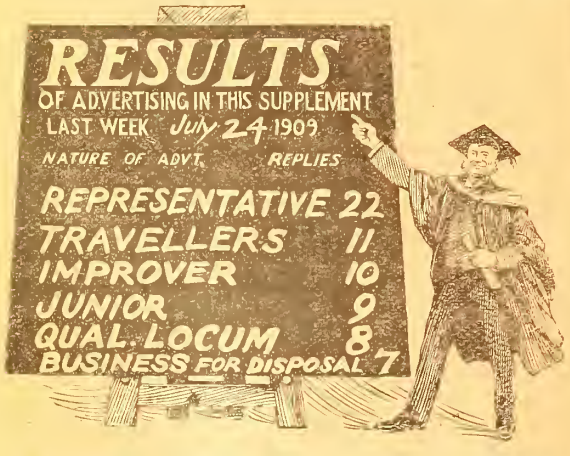
TO LET.

SURREY.—In an excellent position close to station, in a growing residential neighbourhood; to be Let, a large double-fronted Shop, with commodious living premises and cellarage; rent £80. Apply, Seale, Swan & Seale, The Estate Offices, Oxted, Surrey.

AN exceptionally bright and well-finished room, of about 2,500 ft., with all conveniences, to Let; suitable for Chemical Makers or any light manufacturer; rent £70, inclusive. Apply, Secretary, 4 Euston Buildings, London, N.W.

SITUATIONS OPEN.

3s. 6d. *for* 50 *words or less;* 6d. *for every* 10 *words beyond, prepaid.*



This Blackboard demonstrates that Advertisers using these columns get a ready response to their announcements The figures only refer to some of the letters RECEIVED AT OUR OFFICE on behalf of advertisers who use a number or nom de plume.

Replies to Advertisements may be addressed to this Office and forwarded to the Advertiser for an additional charge of 6d. Trade circulars and samples can in no case be forwarded.

TO SAVE TROUBLE.

MANY correspondents answering advertisements in this Supplement enclose remittances to cover the cost of forwarding their letters to advertisers who prefer to be addressed c/o this Office. The Publisher desires to make it clear that *the Advertiser* pays postal charges in such cases, and perhaps this reminder will obviate the necessity of the constant return of remittances which forgetfulness of this fact entails.

RETAIL.

ABERDEEN.—Assistant wanted; good Counter and Dispensing experience essential. Apply, stating age, height, salary required, and when disengaged, full particulars of experience, to Hunter, Chemist, 111 Union Street.

BAKEWELL.—Qualified Assistant wanted; outdoors; no Sunday duty; close 2 o'clock Thursdays. Please state age, height, salary required (outdoors), and references, to E. G. Carrington, Chemist, Bakewell.

BATH.—Outdoors; thoroughly competent Assistant; about 30 years of age; in good-class Retail and Dispensing trade; qualification not essential if capable. Apply to A. F. Collis, 11 Abbey Churchyard, Bath.

BICESTER.—Wanted, about third week in August, Assistant (outdoors) with good knowledge of Dispensing and country business. Apply, stating usual particulars, salary required, and references to last two employers, and enclosing photo (to be returned), J. Bates, Chemist, Bicester.

BIRMINGHAM.—Wanted, competent, qualified Assistant (indoors) for first-class Retail and Dispensing business; of good address. Reply, enclosing carte, with full particulars, T. Chase, Pharmaceutical Chemist, Edgbaston, Birmingham.

BOMBAY.—Wanted, qualified Assistant (under 25 years of age) for a good Dispensing Business. Apply for terms and particulars to "R. L.," c/o S. Maw, Son & Sons, 7 to 12 Aldersgate Street, E.C.

SITUATIONS OPEN *(continued).*

CALCUTTA.—Minor man with good experience required for Calcutta; age under 28; 4 years' agreement; passage paid out and home. Full particulars on application to I40/15, Office of this Paper.

CHELTENHAM.—R. Jeffrey & Son have a vacancy for a capable Assistant; must be a thoroughly accurate and reliable Dispenser; one only kept. Please state salary expected and usual particulars. Letters not answered in 3 days declined.

CROYDON.—Junior Assistant, unqualified, wanted; aged about 20; indoors. State age, height, salary required, and experience, F. H. Davies, Chemist, Thornton Heath.

EAST COAST.—Wanted, steady, reliable, qualified Assistant; beginning of September; good Prescriber and able to take charge. Full particulars and salary required to I40/17, Office of this Paper.

HANTS.—Wanted, active Junior for Mixed Country Family business, with Dispensing experience; capable of taking charge during absence of principal; half-day weekly. Full particulars and salary required (no photos), to "Hants" (I39/63), Office of this Paper.

HASTINGS.—Young permanent qualified, as Second Assistant, required by middle or end of September; weekly half-holiday; three weeks yearly; must be reliable Dispenser. Apply, with photo if possible, and references, Neve & Co., Pharmacists, I2 Wellington Place, Hastings.

HOVE.—Qualified Locum required from August 25 to September 8, both days inclusive; outdoors. State age, terms, and references to Frank Sadler, 83 Portland Road, Hove. Letters not answered within 3 days declined.

INDIA.—A qualified Assistant wanted; 4 years' agreement; salary £200 first year and additional £20 each year; fare (P. & O. second-class) paid out and home. Apply, with photo and testimonials, to "R. L.," c/o S. Maw, Son & Sons, 7 to I2 Aldersgate Street, E.C.

LONDON, S.W.—Required, an Assistant well up in Surgical and Mechanical Dentistry and with knowledge of Retail Drug-trade. Apply, with particulars of previous situations, and state salary required, to "X. Y. Z.," 52 Crescent Lane, South Side, Clapham Common, S.W.

LONDON, W.—An energetic, reliable, qualified Manager wanted immediately; middle-class trade; easy hours and comfortable permanent berth; Extractor preferred; good salary and prospects to a suitable man; outdoors (except dinner and tea). Write or call, Challis, Chemist, Southall, after 6 o'clock Friday, I o'clock Saturday, or I3 The Mall, Ealing, before those hours.

LONDON, W.—Part-time Junior wanted at once; outdoors; daily 8.30 to 10.30 and I2.30 to 2.30. Sundays 6-9, also two days I.30 to 10. Send usual particulars and state salary required to F. G. Turner, 67 Fernhead Road, W.

LONDON, N.W.—Qualified Assistant wanted for Dispensing business. Apply, P. Davidson, Pharmaceutical Chemist, Greenhaugh Cottage, Huntly, N.B.

LONDON, E.—Wanted, at once, qualified Manager; salary 50*s.* week (outdoors); must have one year's good reference from last situation. Apply, Ballard, 393 Commercial Road East.

LONDON, N.W.—Wanted, Assistant; indoors; aged about 22 to 25; accustomed to Dispensing, and must have good references. Write, stating full particulars as to age, height, experience, salary required, and when disengaged, Greenish, 20 New Street, Dorset Square, N.W.

LONDON, N.—Wanted, at once, unqualified Assistant with good Dispensing experience; age 22 to 24. Apply, Downing, 6 Station Parade, Archway Road, Highgate, London, N.

LONDON, W.—Qualified Assistant (indoors) required for Mixed business; one who can Extract preferred. Apply, stating full particulars and salary, to G. M. Watson, Chemist, Wargrave, Berks.

LONDON, W.—Smart Assistant Counterman; outdoors; short hours; previous experience in similar capacity essential. Apply, E. C. Evans, Chemist, Whiteley's, W., Westbourne Grove, W.

LONDON, S.W.—Experienced, smart, qualified gentleman, with good appearance, as Locum from August I6. Manager, Drug Dept., Francis & Son, Ltd., 448/50 Brixton Road.

LONDON, S.W.—Wanted, by August 9, thoroughly reliable, qualified Manager for good-class suburban business; to reside on the premises; half-day off weekly; alternate Sundays on duty. State full particulars to J. A. Day, Pharmacist, II3 Dawes Road, Fulham, S.W.

LONDON, S.E.—Wanted, immediately, energetic Assistant; outdoors; no Sunday duty; finish I P.M. Thursdays. Carter, Chemist, 10 Powis Street, Woolwich.

LONDON, S.W.—Gentlemanly Assistant required; accustomed to good-class Counter trade; about 25 years of age; outdoors. Address, stating experience and salary required, to I222, Sell's Advertising Offices, Fleet Street, E.C.

LONDON, S.W.—Required, Dispenser; Minor qualification; age about 25 years; hours of work approximately 8.45 A.M. to 6 P.M., Saturdays till 2 P.M.; no Sunday duty; outdoors; I4 days' annual vacation. Address, stating full particulars, to I221, Sell's Advertising Offices, Fleet Street, E.C.

MANCHESTER.—Locum, qualified, required in Manchester; fortnight in August. Apply, Hough, Hoseason & Co., Bridge Street, Manchester.

MANCHESTER.—Wanted, immediately, a smart, active, qualified Manager (outdoors) for Branch; Light Retail and Dispensing; permanency to suitable man. Full particulars, age, references, etc., with photo, to Withnall, Chemist, Chorlton-cum-Hardy.

OLDHAM.—Wanted, qualified Assistant; outdoors; state age, height, experience, references, and salary required, with photo. Address, I4I/38, Office of this Paper.

ROME.—Qualified English Assistant for first-class business wanted for the season; must speak fluently French and, if possible, German, and have thorough experience in International Dispensing; entrance as soon as possible; travelling expenses paid. Apply, with reference, to Geo. Baker & Co., Via Terme 92, Rome.

ROSS-ON-WYE.—Junior Assistant wanted; Light Retail and Dispensing; indoors. State age, height, salary required, and experience to Albert Porter, I3 High Street, Ross.

ST. ANNES-ON-THE-SEA.—Indoor Assistant, about 20; September I or thereabouts; some knowledge of Dispensing and good appearance and address essential. Please state age, height, salary required, and enclose photo (last important), J. H. Taylor.

S.E.—Wanted, in a fortnight's time, smart, energetic, obliging Assistant (indoors) for good-class Retail, Prescribing, and Veterinary business; qualification not essential, but must thoroughly understand the business; age 25 to 45; wages and full particulars in first letter or application not entertained. "Bismuth" (I40/23), Office of this Paper.

SHANGHAI.—An Assistant wanted, possessing the Minor qualification, between 23 and 30 years of age; good salary; good prospect for man willing to work. Apply, with photo and full particulars, to "Assistant," c/o Messrs. Evans Sons Lescher & Webb, Ltd., 60 Bartholomew Close, E.C.

SOUTHEND-ON-SEA.—Qualified man wanted; knowledge of Photography preferred. Apply, with full particulars, to G. R. Dawson, Pharmacist, 42 High Street, Southend-on-Sea.

TORQUAY.—A qualified Assistant for a good-class Dispensing business and Light Retail; indoors. Please send usual particulars to James Newlyn, Pharmacist, Wellswood Pharmacy, Torquay.

TUNBRIDGE WELLS.—Qualified Assistant wanted in good-class Dispensing business; outdoors. Apply, with full particulars of experience, stating salary required, and enclosing photo, to A. E. Hobbs, 33 Monnt Pleasant, Tunbridge Wells.

WESTON-SUPER-MARE.—Qualified Manager for branch business. Full particulars, with terms, to Ernest Widgery, Pharmaceutical Chemist, The Central Pharmacy.

ZURICH, SWITZERLAND.—Wanted, young qualified Assistant for October I; opportunity to learn German and French. Apply, with references, to A. O. Werdmüller, Centralapotheke, Zürich.

ABROAD.—Qualified Assistants wanted for Dispensing and high-class Retail; several Assistants kept; climate healthy; good salary; passage paid out. Reply, by letter only, I23/40, Office of this Paper.

ASSISTANT, qualified, outdoors, wanted immediately. Please state age, height, experience, and salary required to "Chemist," II Marina, High Street, Herne Bay.

ASSISTANT; qualified; outdoors; must be well up in all branches of the business; good salary to suitable man. Fullest particulars as to age, height, reference, and photo, Fk. J. Oliver, Maidstone.

DENTISTRY.—Wanted, smart Operator, about 25; knowledge Mechanical preferred; must be steady and good appearance; capable of taking charge. State salary, references, Malton, 103 Westborough, Scarborough.

EXPERIENCED, qualified Assistant (outdoors) for good-class Retail and Dispensing business; quick and accurate Dispenser essential; comfortable permanency; Junior kept. Full particulars, with salary required, Gould, Pharmacist, Teddington, S.W.

LADY Dispenser wanted; must be M.P.S.; afternoon and evening daily (Saturday afternoon only); salary £60 per annum. Apply to Geo. Gadbury, Secretary, St. Paul's Hospital, Red Lion Square, Holborn, W.C.

MANAGER for business in important naval station on South Coast; must be qualified, married, good Prescriber, steady, reliable, energetic; Extractor essential; commission on increase present returns; good house; comfortable berth; permanency for suitable man. Photo, with references and all particulars, to "Quex" (140/4), Office of this Paper.

MANAGER; qualified man required immediately for village branch in Chiddingfold, Surrey; knowledge of Photography; must have undeniable references. Apply, enclosing photo, and stating if married or single, salary required, age, height, etc., in first letter, to Wiles & Holman, The Pharmacy, Haslemere, Surrey.

MARRIED, qualified Manager for branch; steady and energetic. "Midland County" (123/28), Office of this Paper.

MR. STAMP has a vacancy for a qualified Assistant; indoors; no Sunday duty. Apply, giving particulars of experience, salary required, etc., to Mr. Stamp, Ph. Chemist, High Street, Hampstead.

ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Male Dispenser required; candidates must hold Minor qualifications and be willing to engage for 12 months; salary £60 per annum, with rooms, board, and washing. Applications, stating age, with testimonials (limited to 5), to be sent to the undersigned before the 12th August. T. A. Fisher Hall, Secretary. July 30, 1909.

UNQUALIFIED.—Wanted, in Chemical Department, smart young man having had good experience in Retail, with knowledge of Chemistry; must be accurate, neat, and methodical. Apply, with full particulars, Philip Harris & Co., Ltd., Birmingham.

WANTED, immediately, qualified, gentlemanly Assistant; must have good recent references for honesty, sobriety, and industry. Applicants must state age, height, experience, salary required (outdoors), enclose photo, or apply personally to "Chemist," 174 Victoria Street, S.W.

WANTED, Locum (from September 16 for a fortnight) to take charge of a business at Norwich. Apply, "Acetas" (139/39), Office of this Paper.

WANTED, shortly, qualified Assistant or Manager, married or single, to take charge; good references indispensable; salary £180 per annum, with house; permanency. Apply, "Surrey" (140/36), Office of this Paper.

WANTED, immediately, smart qualified Manager for modern cash business in London; to a man giving undeniable testimonials as to ability and general character good salary with interest in the profits is offered. 140/25, Office of this Paper.

WANTED, immediately, Manager for Light Country Retail; live on premises; hours moderate; salary, with house and gas; about 30; married; must be active, obliging, and trustworthy. Coley, Rodboro' Avenue, Stroud.

WHOLESALE.

LONDON Wholesale Drug-house requires experienced Assistant in their Sundries Department. Address, stating previous knowledge and salary expected to "Sundries," c/o Streets, 30 Cornhill, E.C.

ADVERTISER wishes to hear from Representatives calling on Chemists and high-class Grocers who could offer them good Side-line on liberal commission basis; only those with high-class references and willing to work need apply. 122/20, Office of this Paper.

ENGLISH firm of Perfumers specialising in Novelties (all prices) require further Representation by energetic men with good connection among Retail Chemists on commission basis; highest references essential. Address, "Novelties" (140/14), Office of this Paper.

INVOICE Clerk (Junior) required in the office (home and country department) of an old-established City Wholesale Druggist's house; must have some knowledge of the trade and write a good hand; excellent prospects of advancement. Address, stating previous experience and salary required, to "Extending," c/o Street's, 30 Cornhill, E.C.

PILLMAKER (young) wanted, with thorough practical experience of Pill Making and Coating. State age, experience, and wages required to 140/120, Office of this Paper.

REPRESENTATIVE wanted to wait upon Chemists, Drug-stores, etc.; must be an energetic worker and possessed of sound technical knowledge. State age, experience, and salary required, to 140/12, Office of this Paper.

VACANCY occurs in the Buying department of a London Wholesale Drug house for youth of about 17; good opportunity for smart young man; some previous experience in the trade desirable. Please give particulars of experience and salary expected, 143/27, Office of this Paper.

WANTED, in Lancashire town, experienced Pill, Tablet, Ointment, Emulsion, and General Counter hands; applicants must supply full particulars and wages required, or their letters will not be considered. 121/64, Office of this Paper.

FOR SALE.

FOR Sale, the Recipe, Goodwill, Trade-mark, Stock-in-trade, etc., of a valuable old-established Veterinary Preparation; known and extensively used in certain districts for upwards of 70 years; the business has been much neglected of late; in the hands of anyone having a connection amongst farmers and flockmasters, and who could give it attention, a substantial income could be assured. Further particulars write to "Farmer," 208 Goswell Road, London, E.C.

NEWBERY'S comb-cases 2*s.*, tooth-brush cases 2*s.* 6*d.*, brush card 1*s.*; English clinicals, 2m. 9*s.*, 1m. 10*s.*, ½m. 11*s.*, mag. 2m. 11*s.* 6*d.*, 1m. 13*s.* 6*d.*, ½m. 15*s.* 6*d.*; black unbreakable tooth-combs, 3 in. 1*s.* 10*d.*, 3½ 2*s.* 2*d.*, 3¾ 2*s.* 6*d.*; cash with order, 10*s.* carr. paid. BROWN, 161 Bury New Road, Manchester.

AGENCIES.

MILAN.—An energetic firm of high standing wish to take up an additional Agency for one or two English Specialities prescribed by Doctors. Address, "Milan," c/o Evans Sons Lescher & Webb, Ltd., 60 Bartholomew Close, E.C.

AGENTS wanted in England and the Colonies for the Sale of Seedhouse's Gingerette and Lemonette Essences; good profits; high-class preparations. Further particulars from Seedhouse, Chemist, Newmarket.

NOTICE TO LARGE COLONIAL SHIPPERS.—Messrs. Arthur H. Cox & Co., Ltd., Pills, Tablets, etc., Manufacturers, Brighton, England, are desirous of appointing in the various Colonies Agents to represent their interests; only very high-class firms, who have an extensive connection and are well represented in the districts they cover, need apply. All communications concerning the subject, together with suggestions, should be forwarded direct to the firm, where they will be treated in confidence.

PARTNERSHIPS.

PARTNER (active), with about £2,000, required to further develop and extend a thoroughly genuine Patent-Medicine business which has now been established three years; enormous profits from Retail and Wholesale trade; splendid chance to open depôt in London and treble present sales; articles have met with a good reception and are well known amongst an extensive *clientèle*. Testimonials and any further particulars of Leslie Cornes & Co., 4 Bloomsbury Street, London, W.C.

SITUATIONS WANTED

(Colonial, Indian, and Foreign).

1s. for **12** words or less; **6d.** for every **10** words beyond, prepaid. Replies addressed to this office will be forwarded to the advertiser for an additional charge of **6d.**

This heading is reserved for assistants seeking situations in the British Colonies, India, and Dependencies or elsewhere abroad.

INDIA.—Qualified Assistant desires berth with European Chemist; previous Indian experience; aged 26; single; good references; willing to sign 3 years' agreement and pay half second-class passage; salary Rs. 200 per month. 141/40, Office of this Paper.

RIVIERA.—Qualified (25) desires Continental engagement for season; South Coast experience. 142/6, Office of this Paper.

SITUATIONS WANTED.

1s. *for* **12** *words or less;* **6d.** *for every* **10** *words beyond, prepaid.*

[HOME.] RETAIL.

ENGLAND or Continent.—Qualified Assistant requires post in English Pharmacy; speaks fluently German, French, Italian; widespread English and Continental experience; excellent references; shortly disengaged. "Pepper," 8 Rue d'Argenteuil, Paris.

JUNIOR; 20; 4½ years' Dispensing and Photographic experience. 139/19, Office of this Paper.

MANAGER; qualified; 30; married; Continental experience. 129/13, Office of this Paper.

LOCUM; disengaged August 7; long all-round experience; terms easy. 9 Hudson Grove, Leeds.

ASSISTANT or Locum; good experience; disengaged. "A.," 183 Malmesbury Road, Bow, E.

WALES.—Locum; disengaged; 16 years' experience. Jones, 7 Dyffryn Street, Pontlottyn, Glam.

LOCUM, Doctor's Dispenser; August 21 to September 4. "Westholme," 3 Park View Road, Finchley.

DISENGAGED; unqualified; several years' experience. R. M. Lelean, 11 Princess Road, Leicester.

LOCUM; qualified; 30; splendid references; disengaged August 24. Wormald, 34 Botolph Street, Colchester.

ONE or two evenings weekly; Retail or Dispensing; qualified. "Chemist," 31A Oakmead Road, Balham.

LOCUM, qualified, experienced, open for engagement; Manchester district. 219 Manchester Street, Oldham.

UNQUALIFIED; 32; all-round experience; country preferred. "G.," 87 Grange Street, Burton-on-Trent.

JUNIOR; 20; 4 years' experience; disengaged end August; well recommended. 137/16, Office of this Paper.

24; single; Photography; Warehouseman; 10 years' experience. Armstrong, Central Pharmacy, Ambleside.

UNQUALIFIED; 7 years' experience; disengaged; excellent references. "S.," Alpine Cottage, Fulford, York.

PHARMACIST and Surgeon-Dentist disengaged shortly; good Prescriber, etc. "Manager," 61 Hook Road, Epsom.

LOCUM, disengaged about September 11, for holiday duty; best references. Apply, Follows, M.P.S., Tunstall, Staffs.

ASSISTANT; unqualified; married; experienced; Photography; permanency. "Rhei," 23 Nadine Street, Charlton, Kent.

BRISTOL or Bath District preferred; 22; experienced; abstainer; studying. "Junior," Atherstone, Milton Road, Portsmouth.

LOCUM; experienced Counterman, Dispenser, Prescriber, Photographic; unqualified; 35. "Chemist," 4 Eresby Road, Kilburn.

COMPETENT, thoroughly experienced; Locum or permanency; unqualified; outdoors; age 28 years. Wild, 61 Audley Road, Colchester.

MANAGER or Senior; qualified; all-round experience; 28; married; abstainer; disengaged August 16. 139/26, Office of this Paper.

IMPROVER; 18; 3 years' experience in Dispensing, Photography; best references; facility for study. Apply, "A. D.," 1 Brook Street, Treorchy.

HOSPITAL, Institutions, autumn holidays; experienced; registered Chemist and Druggist. "M.P.S.," 31 Cambridge Road, Sidcup, S.E.

DENTAL Chemist's Assistant; 24; gentlemanly; thoroughly experienced; competent; Dispensing and Counter, Extractor, Mechanical Operator; able to set up Artificial Teeth; good references. 144/8, Office of this Paper.

YOUNG man (23), Herbalist, desires situation; knowledge Proprietaries, Window-dressing, Counter, etc.; can be really useful in any capacity; recently managing small business. Lydford, 7 Hamilton Street, Camden Town, N.W.

QUALIFIED Chemist and Optician (F.S.M.C.) desires Management of good-class provincial business; a good salary will be expected, for which full value will be given. "Co-secant," c/o Evans Sons Lescher & Webb, Ltd., Liverpool.

HOLIDAY Locum as Dispenser; Minor. "Castle" (140/32), Office of this Paper.

DISPENSER'S Locum; disengaged until August 15; Minor. 142/32, Office of this Paper.

PERMANENCY or temporary; outdoors; unqualified; 32. Kellard, 25 Stephens Road, West Ham, E.

LOCUM; qualified; reliable; excellent references; disengaged. "Chemist," 168 Ditchling Road, Brighton.

LADY Dispenser and Bookkeeper; disengaged; qualified; excellent testimonials. 140/24, Office of this Paper.

GERMAN Assistant, first class French, good London experience, seeks situation; also Part-time. Ludwig, 51 Bethune Road, Stoke Newington, N.

UNQUALIFIED; 27; disengaged August 9; West-end experience; also knowledge of Photography. Arthur, 195 High Street, Camden Town, N.W.

MANCHESTER or District.—Unqualified; 20; permanency or Locum; good references. H. Freedland, 23 Heywood Street, Cheetham, Manchester.

YOUNG lady (22) seeks engagement with Doctor or institution; 4½ years' experience; knowledge of Bookkeeping. Apply, 139/30, Office of this Paper.

SURGEON'S Dispenser and Bookkeeper; unqualified; age 50; good references; disengaged; Locum or permanent. G. Roberts, Wood Street, Southam, Warwickshire.

LOCUM; qualified; August 23 to September 4 inclusive; outdoors; good references essential; personal application preferred. The City Pharmacy, 27 Chancery Lane, W.C.

NOTTINGHAM or District.—As Locum or permanency; long and varied experience; excellent references; one firm 12 years. "Potassium," 29 Park Row, Nottingham.

ADVERTISER, qualified, having relinquished business of his own, desires engagement as Locum, Reliever, or permanency. Particulars, Smith, 64 Manchester Road, Southport.

QUALIFIED Assistant (22) seeks temporary engagement until end September (approx.); excellent references; Dispensing experience. "Minor," 35 St. Helens Crescent, Hastings.

ITALIAN Chemist, speaking French, German, Russian, some English, requires Junior situation; excellent reference. Segala, c/o Bateman, Chemist, 509 Finchley Road, London, N.W.

JUNIOR (19½) seeks outdoor situation; 3½ years' experience; excellent reference; knowledge of Dispensing, Photography; disengaged August 14. Martin, 3 Caledonian Road, Chichester.

DISPENSER (young lady) requires post; Hall qualification; 4 years' experience; excellent testimonials; live in or at home. "A. S.," "Ambleside," Carshalton Park Road, Carshalton.

LOCUM; permanent or season; 26; recently attempted Minor; Dispensing, Photography; 11 years' experience; highest credentials. "Statim," 19 Arundel Street, Parkside, Nottingham.

EXPERIENCED, qualified gentleman desires permanency; Prescribing, Photography, Dispensing; at present holding position as Manager. Please state salary offered, 139/32, Office of this Paper.

UNQUALIFIED; 40; abstainer; disengaged August 1; first-class experience, with Photography; excellent references; permanency; over 4 years each last two situations. 139/28, Office of this Paper.

24; town and country experience; unqualified; competent; good references; height 5 ft. 8 in.; Travelling also entertained; at liberty August 15. "H. E. M.," 32 High Street, East Grinstead, Sussex.

ASSISTANT; qualified; North preferred; liberty shortly; Prescriber, Dispenser, Dentistry, Agriculture; 33; excellent references; permanency. "B.," 7 Collison Street, Hyson Green, Nottingham.

ASSISTANT; 21; disengaged; experienced, Counter, Photography, Dispensing, preparing Galenicals; excellent Window-dresser; indoors or out; good references. Forryan, Bell Street, Wigston, Leicester.

MANAGER; view succession in good business; preferably market town, not essential; 29; experienced Buyer, Controller; splendid experience and references. "Pharmacist," 91 High Street, Colchester.

ASSISTANT; 28; 5 ft. 10 in.; West-end and Suburban experience; well up Photography, Counter, Window-dressing, etc.; unqualified; outdoors; good references. "Statim," 68 Dagnan Road, Balham, S.W.

PART-TIME; one, two, or three days; experienced; good references. Gorell, 80 Mill Hill Road, Acton, W.

ASSISTANT; 27; unqualified; excellent reference; disengaged. Innes, 10 Roseneath Road, Clapham Common.

HOLIDAY Locum; qualified; sold own business; terms moderate. "Chemist," 5a Cottage Grove, Walworth, S.E.

LOCUM; qualified; disengaged; experienced and reliable; highest credentials. "Chemist," 14 Caledonian Road, N.

DISPENSER and Surgery Attendant; highly recommended; 32; married. "B. C.," 505 Southwark Park Road, S.E.

MANAGER or Senior, with view to succession preferred; 33; qualified; single. Apply, 141/22, Office of this Paper.

JUNIOR requires Locum till August 31; highest references and good Dispensing experience. Apply, 143/40, Office of this Paper.

UNQUALIFIED; married; 35; 20 years' experience; Sheffield or district preferred. Apply, "Caryoph." (141/5), Office of this Paper.

JUNIOR Assistant; 21; good Dispensing and Counter experience, knowledge of Photography. "Iridis" (141/25), Office of this Paper.

LOCUM or permanent; thoroughly reliable, up-to-date man; excellent references; unqualified. "E. E.," 68 High Road, Willesden Green.

PART-TIME; mornings and afternoons; permanency preferred; excellent references. "Statim," 11 Ormonde Mansions, Southampton Row, W.C.

ASSISTANT; unqualified; 33; married; experienced in all branches; abstainer; recently in College. "Umbel" (121/36), Office of this Paper.

DISENGAGED; Dispensing, Prescribing, Counter; energetic; unqualified; outdoors; married; competent. "Charles," 4 Henry Street, Bath.

QUALIFIED; middle aged; energetic; Holiday Relief; Retail or Dispensing; disengaged to August 21. Address, "W. A.," 185 St. John Street, Clerkenwell, E.C.

VERY moderate terms; permanency; Manage Mixed branch; married; reliable, energetic; middle-aged; Extractor, Prescriber; unqualified. 129/10, Office of this Paper.

LOCUM, Dispenser, etc.; 30; reliable and experienced in Doctor's Surgery, Institution, and Chemists' work. Write or wire, "Dispenser," 38 Sutherland Square, Walworth, S.E.

WHOLESALE.

YOUTH (aged 16) seeks position in Laboratory; willing to make himself useful. "W. G. K.," 80 Third Avenue, Manor Park, Essex.

YOUTH (18) seeks situation in Wholesale Laboratory; 3 years' experience in Retail trade; disengaged end of August. Apply, 140/6, Office of this Paper.

A SUCCESSFUL business Chemist wishes to Represent high-class firm; any ground; age 30; reliable references. "Tact" (140/101), Office of this aper.

TRAVELLER, working Doctors and Chemists in South Wales for Drug house, desires another good Agency; part expenses and commission. 141/33, Office of this Paper.

PHARMACIST seeks position in Colonies or abroad as Representative or to establish depôt; excellent credentials; age 31. "Enterprise" (140/11), Office of this Paper.

PHARMACEUTICAL Chemist (27) seeks responsible post in Wholesale; quick and methodical; excellent references; disengaged September. 142/13, Office of this Paper.

REPRESENTATIVE; shortly disengaged; 12 years' connection amongst the best men in Lancs and Yorks; highest references and security. 141/11, Office of this Paper.

TRAVELLER, resident in Birmingham and calling upon Chemists in the Midlands, wishes to Represent good house; Drugs, Sundries, etc.; commission basis. Apply, 141/28, Office of this Paper.

REPRESENTATIVE.—Chemist (aged 31) wishes to Represent good Drug or Sundry house; fixed salary essential; well educated, versatile, and thoroughly acquainted with the requirements of the Retail trade; personal interview courted. "Peregrine" (138/3), Office of this Paper.

MANUFACTURING Chemist, with considerable experience of General Manufacture, Analysis, Specialities, etc., in London house, desires engagement; practical knowledge all departments; highest references. 141/19, Office of this Paper.

1/3

GUMMED PRICE TICKETS

Crimson ground, white figures. Stocked in all usual prices up to 21/-, each price handed separately in hundreds.

The Midget, 9d. per 1,000
The Magnum, 1 6 " assorted 10 prices.

Full illustrated list of Blanks for use with these tickets free on application.

10D.

DUDLEY & CO., Ticket Writers & Printers, Holloway, London

MISCELLANEOUS.

MCADAM & TUCKNISS, Sharedealers, 30 Tranquil Vale, Blackheath, S.E. Telephone 81A Lee Green.

SHARES FOR SALE (free of commission, subject).—160 Allen & Hanbury "A" 6 per cent. Preference, 24s. 10½d.; 200 Ayrton, Saunders & Co. 5 per cent. Preference, 19s. c.d. September 1; 83 Camwal Ordinary, 1s. 4½d.; 140 Idris "A" 6 per cent. Preference, 6s. 10½d.; 250 A. J. White Preference, 11s. 9d.; 100 Quinine Bitters, 10s. 4½d.

WANTED (subject).—100 Camwal Preference, 5s. 9d.; 100 Lewis & Burrows Preference, 11s. 1½d.; 30 G. B. Kent Preference, 16s. 1½d.; 20 Evans Lescher & Webb Preference, £5 1s.

List of shares for sale and wanted sent free on application. Bankers, London and County. Established 1898.

WE HAVE WHAT YOU REQUIRE, Drug Fittings, Counters, Wall-cases, Dispensing-screens, Perfume-cases, etc., in almost all sizes; second-hand; condition first-class; prices reasonable. Write for sketches and details giving approximate sizes, or call and inspect. RUDDUCK & CO., 262 OLD STREET, E.C.

COMPLETE FITTINGS FOR SHOP.—In excellent condition; as good as new; 12-ft. drug fitting, 6-ft. wall-case, 6-ft. screen and counter, 8-ft. serving-counter, perfume-case and desk; £30 the lot; a great bargain. PHILIP JOSEPHS & SONS, LTD., 93 Old Street, London, E.C.

TO Apprentices, Juniors, etc.—If you wish to pass the Preliminary quickly and with little trouble, write to Mr. Charles Harker, who will coach you by post; thorough systematic teaching; numerous successes in 3 and 6 months; special attention given to those of neglected edueation; 85 per cent. recent successes; terms very moderate. Charles Harker, 239 Chapter Road, Cricklewood, London, N.W.

I Have Not Ordered Mine Yet.

No, though my visits to my clients are distinctly of a flying character, I have not ordered my aeroplane yet—which reminds me that some 8,000 chemists in the U.K., to say nothing of thousands in the colonies, have not sent for my free booklet, which tells you how I have increased nearly 650 chemists' businesses both as regards returns and, what is more important, NETT PROFIT. I tell you more about it on page 82 of this issue. Every fifth applicant for free booklet will receive 2/6 P.O. until August 6, just as a sporting offer. Don't all speak at once, but send postcard to-night.

BERNARD SLACK, Princes Chambers, WOLVERHAMPTON.

RESULT OF A WINDOW DISPLAY.

"I sold as the result of the last window display 14 doz. bottles More than I have previously sold in a year before," wrote a Pharmacist this week. That was a refined attractive window display that sold the goods, and if you wish to do the same, and increase your business, you must have Good Business Ideas, Attractive Window Displays, and Systematic Advertising, which is all in my business-pulling system. No catchpenny ideas. Booklet "How to Increase Your Business," sent post free on receipt of post card to pharmacists.

J. R. B. ALLISON, Pharmacist & Business Specialist, RETFORD.

Supplementary News.

British Pharmaceutical Conference.

Wednesday afternoon's excursion on the Tyne was by one of the paddle-steamers of the Tyne Commissioners. Starting from the Quayside Ferry Landing, the members were conveyed to North Shields, passing on the way characteristic features of the industrial life of the district, such as are depicted in "Tyneside Industries" in this issue. The shipbuilding-yards were of great interest. From North Shields the journey was by tram to Tynemouth, where tea was served in the Assembly Rooms. After tea those who cared to do so visited the sands or castle, the return to Newcastle being made by electric train.

Coal-dust explosions were part of the attractions shown in the evening at the Armstrong College. Professor Bedson had arranged apparatus of his own design, which he employs in testing the inflammable nature of coal-dust and registering the intensity of the explosions. A dust is made in a large flask in which the air is under pressure, and then an explosion is induced by means of an incandescent wire or electric spark. The force of the explosion is registered by means of an aluminium pendulum, which travels along a scale, the distance indicating the relative force. Starch powder and aluminium powder were also exploded in the apparatus. A vote of thanks to Professor Bedson was moved by the President, seconded by Dr. Symes, and carried with applause.

The company then assembled in the Common Room, where a smoking-concert was held. Sir Edward Evans was in the chair, and pleased everybody by his witty introductory speeches. The programme was varied, a feature being the performances on the Northumbrian bagpipes by Mr. Richard Marn.

For the excursion a special train of eight coaches left Newcastle on Thursday, the first stop being Corbridge, where, after a walk of a mile, the excavations on the site of the Roman city Corstopitum were visited. These were explained by Mr. Foster, Director of the Excavation Committee. The train journey was then resumed to Hexham, where the beautiful Abbey was visited, and where a lecture was delivered by

Mr. J. P. Gibson, who is the greatest authority on the local antiquities. Luncheon was served in the Corn Exchange, with Mr. Weddell in the chair, and "Success to the Conference" was proposed by Mr. Stuart and replied to by Mr. Peck. Then Mr. Tocher proposed "The health of Mr. Clague," to which the Local Secretary replied, and the train journey was resumed to Naworth.

Legal Reports.

PAREGORIC ELIXIR.—At Bingley (Yorks) on July 28, Charles Henry Hartley, drug-store keeper, Main Street, Wilsden, was summoned under the Merchandise-marks Act (1887), at the instance of the Pharmaceutical Society, (1) for selling paregoric elixir with a false trade description, and (2) for applying a false trade description to goods—viz., paregoric elixir. Mr. Beldon appeared for the plaintiff Society and Mr. Clifford Dunn was for the defence.—Mr. Beldon explained that on June 28 an officer of the Society bought in defendant's shop "an ounce of paregoric," which was labelled "Paregoric Elixir. Poison. A. Hoyle, chemist by examination, Wilsden, near Bradford," with a short word added in ink, which might be "sub." or "rub."—Mr. Arthur Foulds proved the purchase, and explained, in answer to Mr. Dunn, that he took the word "sub." to mean "substitute."—Mr. T. Tickle, F.I.C., stated that the liquid on analysis was found to be destitute of opium.—For the defence Mr. Dunn said the bottle had been in the possession of Mr. Foulds for eleven days, and he called the defendant, who said that the threepennyworth of paregoric elixir substitute purchased by Mr. Foulds was the first he had sold since he had been in business for himself. He had made up this substitute on purpose to comply with the requirements of the Pharmacy Acts.—After a few minutes' consultation the Bench decided against the defendant on the first ease, but the Chairman (Mr. J. R. Robinson) stated that as this was the defendant's first offence he would be fined only 2*s.* 6*d.*, and costs.—The second summons was withdrawn.

PEPSIN CHEWING-GUM.—At Bradford on July 27, Jonas Bottomley, 17 Duckworth Lane, Bradford, was summoned for selling pepsin chewing-gum which was devoid of pepsin. For the defence it was urged that the basis of the article was chicle gum with a certain quantity of added pepsin, but that it was possible that, owing to the manner of its distribution, some of the tablets might not contain pepsin. The Stipendiary Magistrate reserved his decision.

Society of Chemist-Opticians.

A Council-meeting of this Society was held at St. Bride Institute, Ludgate Circus, E.C., on July 28. There were present Messrs. F. S. Horsey (in the chair), Geo. Bennett, W. H. Crosland, J. H. Hopper, and J. Harcombe Cuff (Hon. Secretary). The following new members were elected: Messrs. B. Armstrong (Isleworth), J. R. D. Barfoot (Chesterfield), J. Barker (Leicester), A. Hagon (Cardiff), and J. Prescott (Tetbury). The report of the Optical Committee relating to the examination scheme of the Worshipful Company of Spectacle-makers was received and adopted.

Blackburn Chemists Win.

On a further consideration of the matter, the Watch Committee of the Blackburn Corporation have refused the application of a local florist and seedsman for a licence to sell poisons. Since the committee's first decision to grant the application and the reference of the matter back, the Blackburn chemists have urged further objections in a letter, and these have had the desired effect.

Bankruptcy.

Re WILLIAM FOWLDS, Ingrow Bridge, Keighley, Yorks, Chemist and Druggist.—The public examination of this debtor took place at the Bradford County Court on Wednesday, when he narrated his business history, and the examination was closed, subject to the signature of the notes on August 11.

Thursday's Drug-auctions.

A moderate quantity of first-hand drugs was brought forward to-day, and although the feeling was "holidayish," a fair quantity changed hands, but prices mostly favoured buyers. Cape aloes declined 2*s.* to 2*s.* 6*d.* for good hard, and other grades sold irregularly, the bulk being ordinary seconds, more or less soft. Extreme prices were paid for the few cases asafetida offered. Round buchu was firmer, crop now being practically over; "ovals" were dearer. Sumatra benzoin again sold cheaply for medium seconds, but was not substantially lower. Cardamoms met with a fair demand at steady rates, bold sizes being firmly inclined. Cuttlefish-bone is easier and plentiful. Fine reboiled dragon's-blood was neglected and in heavy supply. Gamboge quiet. Jamaica honey realised firm rates. Matto Grosso ipecacuanha was only sparsely offered, and sold firmly. Rhubarb is lower generally, especially High-dried. Both grey Jamaica and Native sarsaparilla declined a penny on heavy offerings. New Tinnevelly senna brought very firm rates. Jamaica beeswax was lower, and other descriptions, including Madagascar, did not sell. The following table shows the quantity of goods offered and sold, the asterisk denoting private sales:

	Offered	Sold
Aloes—		
Cape	87	66
Socotrine (kegs)	10	0
Zanzibar (cs.)	6	0
Ambergris (pkgs.)	1	0
Aniseed	20	10
Asafetida	8	7
Balsam (Peru)	2	0
Benzoin—		
Sumatra	167	77
Buchu	17	14
Camphor (Jap.ref.)	8	2
Cannabis indica	6	3
Cardamoms	197	147
Cascara sagrada	300	0
Cassia fistula	1	1
Cinchona	22	18
Cochineal	4	0
Colocynth pulp	16	7
Coriander	20	0
Cubebs	26	1
Cuttlefish bone	128	20
Dill seed	159	0
Dragon's-blood	34	6
Elemi	20	0
Euphorbium	8	0
Fennel seed	50	0
Fenugreek seed	100	0
Galls (Pers.)	12	0
Gamboge	5	0
Gentian	10	10
Glue (pkgs.)	111	111
Gum arabic	141	0
Honey—		
Hayti	4	0
Jamaica	364	225
New Zealand	20	0
Insect-flowers	1	0
Ipecacuanha—		
Matto Grosso	7	7
Jalap	3	0
Kamala	3	0
Kino	12	0
Kola	15	0
Lime-juice	14	0
Liquorice-root	2	2
Manna	2	0
Myrrh	51	0
Oil—		
bay	1	0
cinnamon	11	0
clove	4	0
cod-liver (Norw.)	15	0
eucalyptus	20	0
lemongrass (pot)	1	0
orange	2	0
peppermint	3	0
Olibanum	161	23
Opium	4	0
Orange-peel	12	*12
Orchella weed	158	0
Orris	17	2
Quillaia	40	0
Rhubarb (China)	94	35
Sandalwood	63	0
Sandarac	4	0
Sarsaparilla—		
Grey Jamaica	61	0
Guatemala	3	3
Native Jam.	29	17
Seedlac	111	0
Senna and pods—		
Alex.	30	24
Tinnevelly	226	190
Stavesacre	2	0
Tamarinds	52	19
Tragacanth	35	12
Wattle gum	1	0
Wax (bees')—		
Cape	2	0
East Indian	75	3
Jamaica	30	14
Madagascar	277	0
Mombasa	6	0

Higher.	Easier	Lower
Asafetida	Cannabis indica (E. African)	Aloes (Cape)
Buchu (Ovals)	Cuttlefish bone	Rhubarb (H.D.)
Cardamoms		Sarsaparilla (Grey Jam. and Native)
Honey (Jamaica)		Wax, bees' (Jam.)

ALOES.—Cape was the only description which met with any inquiry, the best qualities of which sold (subject) at a decline of 2*s.* to 2*s.* 6*d.* per cwt., the medium and lower grades meeting with an irregular reduction of 1*s.* to 2*s.* per cwt. Of Mossel Bay (usual 20 per cent. tares) 38 cases sold as follows: Good bright hard 28*s.* 6*d.* to 29*s.* 6*d.* subject, ditto slightly soft 27*s.* 6*d.* to 28*s.* 6*d.*, fair seconds slightly drossy and soft 26*s.* to 27*s.*, and dull soft and drossy 26*s.* On estimated tares 28 cases Algoa Bay offered and sold at 27*s.* to 28*s.*, for good to fine bright hard 26*s.* to 26*s.* 6*d.*, for fair ditto, and 25*s.* 6*d.* for drossy seconds.

ANISEED.—Ten bags ordinary Russian sold at 19*s.* 6*d.*

ASAFETIDA.—Very scarce. The eight cases from the Persian Gulf offered to-day excited keen competition and extraordinarily high prices were paid, from 6*l.* 15*s.* to 7*l.* per cwt. being realised for four cases of mostly free pale and brown almonds, mixed with small, and 5*l.* 5*s.* for harder and more blocky. Two cases common block sold at 40*s.* subject.

BENZOIN.—Steady. In one quarter a further string of 77 cases Sumatra gum was pressed for sale, this bringing the total to about 500 cases which have been offered in this interest. The quality on this occasion was not so good as that offered a fortnight ago, being middling seconds, with small to medium almonds, slightly false packed, which sold at from 5*l.* 2*s.* 6*d.* to 5*l.* 7*s.* 6*d.* per cwt. Fair seconds was held at 6*l.* to 6*l.* 10*s.*, and good at 7*l.*, at which private sales have been made.

Buchu.—Rather firmer inclined. Ten bales of good round green sold at from 1*s.* 5*d.* to 1*s.* 6*d.*, and fair greenish slightly stalky at 1*s.* 4*d.* "Ovals" were dearer, four bags realising 8½*d.* to 9*d.* for green. The crop is said to be practically over.

Camphor.—Several cases Japanese refined tablets were offered, of which part (¼-oz.) had been sold privately at 1*s.* 9*d.*; three cases 1-oz. tablets were retired at 1*s.* 9*d.*

Cannabis Indica.—East African was again lower, three cases of ordinary brown, partly perished and partly with stalks, selling without reserve at 3½*d.* Three cases fair Bombay tops were held at 5*s.* per lb.

Cardamoms were in fair demand at steady prices, with the bold sizes rather dearer, the following rates being paid: Ceylon-Mysore.—Fine bold pale selected, 2*s.* 11*d.*; good bold palish to pale, 2*s.* 1*d.* to 2*s.* 4*d.*; bold long palish to pale, 1*s.* 10*d.* to 2*s.*; medium and bold palish to pale, 1*s.* 7*d.* to 1*s.* 9*d.*; small and medium palish to pale, 1*s.* 4*d.* to 1*s.* 6*d.*; tiny pale, 1*s.* 4*d.* to 1*s.* 5*d.*; brown, split and pickings, 1*s.* 3*d.* to 1*s.* 4*d.*; bold long brownish, 1*s.* 8*d.*; medium and bold ditto, 1*s.* 7*d.* to 1*s.* 8*d.*; small brown, 1*s.* 4*d.* to 1*s.* 5*d.*; extra bold pale splits, 2*s.*; medium and bold ditto, 1*s.* 6*d.* to 1*s.* 9*d.*, and small splits, 1*s.* 5*d.* to 1*s.* 7*d.*; ordinary pale to good seed sold at 1*s.* 6*d.* to 1*s.* 8*d.* per lb.; Aleppy, small and medium heavy green, were bought in at 1*s.* 9*d.*

Cascara Sagrada.—Three tons, or 150 bags, of fair 1906 crop, and a similar quantity of three-year-old crop, were held for 40*s.*

Cassia Fistula.—A single bag of ordinary Dominican pod realised 18*s.*

Cinchona.—A parcel of 22 serons Huanuco offered, of which 18 sound realised 6*d.* per lb. for good bright quill, part broken.

Colocynth.—Seven bales of sea-damaged Persian *pulp*, all more or less blocky, sold at from 3½*d.* to 4½*d.* Good sound pulp was retired at 10*d.*

Cubebs.—Five cases of genuine oily from Bombay were retired at 5*l.* 15*s.* for fair; a case of powder and sweepings sold at 20*s.* subject.

Cuttlefish-bone.—Easier. Ten mats of fair bold palish Bombay bone, slightly broken, sold cheaply at 3½*d.* per lb., being ½*d.* below valuation. A fair quantity has arrived recently.

Dragon's-blood.—In large supply and neglected, twenty-six cases of fine reboiled lump being offered and bought in at 12*l.*, the limit being 11*l.* 15*s.* Six cases Zanzibar drop sold without reserve at from 28*s.* to 31*s.* per cwt.

Elemi.—Twenty cases were offered, including fair white Manila paste, which were retired at 47*s.* 6*d.*; slightly yellowish at 45*s.*, and yellow at 42*s.* 6*d.* per cwt.

Fennel-seed is dearer. Fifty bags of fine green well-harvested Syrian were firmly held at 20*s.*, a bid of slightly less being refused.

Gentian.—Ten bags of ordinary, rather lean, realised 18*s.*

Glue.—A lot of 111 bags manufactured by MM. Karl Hertz & Son sold "for account of whom it may concern" at from 27*s.* 6*d.* to 29*s.*

Gum Arabic.—A lot of sixty-three bags Ghezireh sorts was bought in at 23*s.*

Honey.—Jamaica was in good demand, and full to rather firmer prices were paid as follows: Bright clear amber liquid 30*s.*, fair red liquid 26*s.* 6*d.* to 27*s.* 6*d.*, ordinary to fair brown liquid 24*s.* 6*d.* to 25*s.* 6*d.*, and low dark to darkish liquid 23*s.* to 24*s.*, good pale set 30*s.* 6*d.* to 32*s.* 6*d.*, fair set 29*s.*, palish set 26*s.*, fair to good yellow set 26*s.* to 28*s.*, and brown set and setting 23*s.* 6*d.* to 25*s.* 6*d.* per cwt. Twenty cases of canary-coloured set New Zealand were bought in at 40*s.*

Ipecacuanha.—Firm. Five bales Matto Grosso offered, of which four bales good bright natural sold at 5*s.* 9*d.* to 5*s.* 10*d.*, and a bale of sea-damaged realised 5*s.* 7*d.* Two bales Matto Grosso pickings sold at 5*s.* 3*d.*, and five bales Cartagena were not in time for auction.

Kino.—Two cases good bright Cochin grain were held for 1*s.* 4*d.* per lb.

Liquorice-root.—Two bales common Persian sold at 8*s.* 6*d.* per cwt.

Oil, Cinnamon.—A bid of 2¼*d.* per oz. is to be submitted for two cases of Ceylon leaf. Privately the price is 2⅜*d.*

Oil, Cod-liver.—Our Bergen correspondent writes on July 26 that the market is very quiet at the nominal quotation of 64*s.* per barrel, c.i.f. London, for finest non-congealing Lofoten oil. The exports from Bergen up to date amount to 7,068 barrels, against 9,684 barrels at the same date of last year. At the drug auction 15 barrels Norwegian oil were bought in.

Oils, Essential.—Two cases Ceylon *Cinnamon-leaf* oil were held at 2⅜*d.* per oz., and for 10 cases *Eucalyptus* oil (63 per cent. to 64 per cent.) 1*s.* 1*d.* was wanted. A case of *Bay* oil from Montserrat was bought in at 5*s.*, and three cases Hale and Parshall's American *Peppermint* oil at 8*s.* 3*d.* Four cases Seychelles *Clove-leaf* oil were held for 2*s.* 6*d.* per lb., and two barrels West Indian distilled *Orange* oil (sweet and bitter) were retired at 7*s.*

Olibanum.—Fifteen cases of good garblings sold at 15*s.*, and eight cases woody pickings realised 6*s.* 6*d.* to 7*s.* 6*d.*

Orange-peel.—Twelve bags of common coarse ringlets were offered without reserve, but had been sold privately.

Orris.—Two bags of fair small pale picked Florentine sold at 40*s.* per cwt. subject. Good was bought at 45*s.* and fair sorts at 37*s.* Two serons of Mogador were retired at 25*s.*

Rhubarb.—Lower for High-dried, 16 cases of which sold at 11*d.* per lb. for small to medium flat, with three-quarters fair pinky fracture, one case going at 10*d.* Nineteen cases were offered, and sold without reserve as follows: Medium and bold round Shensi, part dull, undesirable coat, with three-quarters fair pinky fracture, 1*s.* 1*d.*; small and medium round ditto, also dull coat, 1*s.* to 1*s.* 1*d.*; and bold flat Shensi, dull coat, half pinky and half grey fracture, 1*s.* 1*d.*; medium and bold Shensi, with three-quarters good break, was retired at 1*s.* 10*d.*, good pickings at 1*s.* 6*d.*, and small round and druggists' trimming root at 1*s.* 10*d.*

Sarsaparilla.—Easier. The large quantity of grey Jamaica offered met a flat market, buyers holding off in anticipation of lower prices, bidding 1*s.* 2*d.* for fair grey, and in consequence no business was done, 1*s.* 3*d.* being the lowest. This price was afterwards paid privately for a fair quantity, marking a decline of 1*d.* on previous auction. Of a string of twenty-six bales Native-Jamaica fifteen sold at 1*d.* easier prices, 1*s.* 1*d.* being paid for good red, 1*s.* for fair red, 10*d.* to 11*d.* for dull red and yellow, and 9½*d.* for common yellow. Two bales, apparently Native-Jamaica, of deep red colour sold without reserve at 11*d.*, and three bales of rough Guatemala, slightly chumpy, sold without reserve at 8½*d.*

Senna.—The bulk of the offerings of Tinnevelly consisted of new crop, and met with keen competition at very full prices, as follows: Good bold greenish, 4*d.*; medium and bold ditto, 3*d.* to 3¾*d.*; small and medium greenish, 2*d.* to 2¾*d.*; and common small specky, 1*d.* to 1¾*d.* per lb. Dark to fair *pods* sold at from 3¼*d.* to 3¾*d.* Twenty-four bales of ordinary broken Alexandrian leaf sold without reserve at from 2*d.* to 2⅛*d.* per lb.

Tamarinds.—Nineteen packages Antigua sold at from 9*s.* 6*d.* to 12*s.* 6*d.* per cwt. in bond for dry to good.

Wax, Bees'.—Quiet. Jamaica was lower, fourteen packages of dark brown to fair red mixed selling at 7*l.* 15*s.* per cwt., irrespective of quality. Good yellow Madagascar block was held for 6*l.* 17*s.* 6*d.*, fair ditto softish 6*l.* 15*s.*, and dark and slightly drossy at 6*l.* 12*s.* 6*d.* Three cases common yellow Bombay sold without reserve at 85*s.*

Continental Drug and Chemical Markets.

Carnauba Wax.—The demand in Hamburg is limited to the barest necessities, and the upward tendency of current grey is not expected to continue; both current and fatty grey have been sold at 183m. per 100 kilos. Yellow qualities are steady and unaltered at from 2.20m. to 3m. per kilo.

Cascara Sagrada.—Further sales have taken place in Hamburg. Spot is held at 85m. per 100 kilos., and for shipment 80m. is still quoted.

Citric Acid.—Some sales for prompt delivery have taken place at comparatively low prices, and in second-hands 2.75m. per kilo. is quoted, the same price being asked forward.

Ergot.—The demand in Hamburg continues and prices have improved further, business having been done at 3m. per kilo. for both Spanish and Russian. Stocks have dwindled to a trifle, and to-day 3.10m. is asked.

Japan Wax is quiet, with small sales spot (Hamburg) offering at 86m. per 100 kilos. ex warehouse. Prices for shipment remain unalterd at the higher rates, but they do not influence spot prices.

Platinum and Salts.—The downward movement, which has lasted for many weeks, came to a standstill quite recently, and a steadier tendency is evident, owing to a rise in metal. Salts in consequence now cost a little more, and it would be advisable to watch further movements.

Gambier-cultivation.

The Netherlands India Government has taken steps to encourage gambier-growing among the Malays of West Sumatra by giving advances to the cultivators, free of interest. At present the export there averages 12,000 piculs a year, against 70,000 piculs in the residency of Rhio. Rhio gambier is grown by Chinese, and has a good reputation in the market, says the "Malay Mail." The Government has been advised to engage Chinese planters from Rhio to teach the Sumatra Malays how to grow gambier for the European and American markets. So far the Malay gambier is grown only for the local market.

TELEPHONES: 81 & 81a LEE GREEN.
TELEGRAMS: "McADAM BLACKHEATH S.E."
McADAM & TUCKNISS, STOCK AND SHARE DEALERS.
BANKERS: LONDON & COUNTY BANK, BLACKHEATH.
OFFICES: 30 TRANQUIL VALE.

POSTAL ADDRESS:
BLACKHEATH, S.E.

MESSRS. McADAM & TUCKNISS

INVITE the attention of the numerous readers of *The Chemist and Druggist* to the following points in connection with their Stock and Share Business:

Establishment of Firm. OUR business was first established in the year 1898.

Advertisement in "The Chemist and Druggist." WE commenced to advertise in this paper on October 12th, 1901, and our advertisement has appeared *weekly ever since* in the Miscellaneous Column of the Supplement.

Our Clientele. We now number amongst our clients many Chemists and Druggists all over the United Kingdom to whom we are able, if necessary, to refer.

Method of Business. WE endeavour whenever possible to make a close price in any shares we have to deal in by coming between the buyer and seller at a price which only represents a fair commission to ourselves, and often for cash settlement.

Names of Companies in which we have business. WE make a speciality of the shares of all Companies in which Chemists and Druggists are interested, and particularly in the following: Allen & Hanbury; Claudius Ash & Sons; Benger's Food; Boots' Drug Stores; Camwal; Castner Kellner Alkali; Dental Manufacturing; Evans, Lescher & Webb; Idris; Ilford; G. B. Kent & Sons; J. Knight & Son; Lamson Paragon Supply; Lewis & Burrows; Parkes' Drug Stores; Pears' Soap; Peek Frean; Sanitas; Stevenson & Howell; Virol; and, A. J. White.

Enquiries. WE invite correspondence, and answer all enquiries promptly, and where so desired are prepared to advise as to investments *free of charge*.

Monthly Investment Circular and List. WE publish monthly an Investment Circular and List of Stocks and Shares for sale and wanted, which is sent free on application to any address, and entertain no business on the 'cover' system.

Settlements and References. WE are always prepared for correspondents to make full enquiries concerning ourselves through their own Banks or our own as at heading, or will complete purchase or sale of shares or stock against cash at any Bank if so desired.

Stock Exchange. WE deal largely with many members of the London Stock Exchange, who know us well and treat us as the market in many of the Companies mentioned above, and our telephones bring and keep us immediately in touch with the market.

EXCHANGE COLUMN

FOR DISPOSAL.

APPARATUS.

SODA-WATER machine and gross syphons; perfect but cheap; an opportunity not to be lost. Apply, "PROGRESS" (141/34), Office of this Paper.

BOOKS AND PERIODICALS.

GREAT Curiosity.—First 12 numbers of "Chemist and Druggist," in original folio, showing numerous interesting advertisements; what offers? 40 London Road, Brighton.

FORMULÆ.

LIQUID brass-polish formula for sale. FRANCE, 42 Vartry Road, London, N.

FORMULA for the best ginger-beer powders sold, suit export trade; 3*d*. packets with packing costs about 12*s*. gross. "BRUNO," 141 St. James's Street, Burnley.

OPTICAL AND PHOTOGRAPHIC.

LENSES (spherical), several doz. pairs, also gold-filled frames; 45*s*.; bargain; approval; deposit *C. & D.*, "SPERAMUS" (141/15), Office of this Paper.

¼-PLATE folding Bart's, 3 D.D. slides, Ensign astigmat lens (f. 5.6), and Koilos shutter, all in leather case and almost new, £3 10*s*., cost over £9; ¼-plate Premo, 5*s*.; £2 12*s*. 6*d*. Kodak casket lens, 17*s*. 6*d*. TORRENS, Youghal.

LAURENCE'S gold-filled astigs, spectacles, cases, lenses, cost £12, what offers? also Orthrop's chart (new) 7*s*. 6*d*., and advertising-signs; small trial case, accept £1; all in new condition. J. H. BESWICK, Chemist, Blackburn.

PROPRIETARY ARTICLES.

ELEVEN dozen Mason's extracts and wine essences; 30*s*., carriage paid. 142/28, Office of this Paper.

40 TINS containing 1 doz. Howard's 8-pint Seltzogene charges; 1*s*. per tin. 138/101, Office of this Paper.

HALF retail price.—16 13½*d*., 4 2*s*. 9*d*. Towle's chlorodyne; 44 13½*d*., 8 2*s*. 3*d*. Thierry's balsam; 35 doz. 1*d*. Walk Easy. Apply, 139/27, Office of this Paper.

SECCOTINE.—Overstocked.—One doz. 6*d*. tubes, post free 3*s*. 4*d*.; 3 doz., 9*s*. 6*d*.; in original sealed boxes; cash with order. HUGHES, Pharmacist, Melksham.

WHAT offers?—Rayner's Hedakene powders, 2 doz. 7½*d*., 3 doz. 1*s*. 1½*d*., 2 only 11*s*.; Davidson's bile beans, 6 doz. 1*s*. 1½*d*.; Chapman's oils, 1 doz. 2*s*., 1 doz. 2*s*. 6*d*., ½ doz. 5*s*.; Konvo powders (soiled), 7 only 1*s*. 1½*d*.; best offer accepted; cash or saleable patents. PRICE & CO., LTD., Blackheath, Birmingham.

SHARES.

SHARES for Sale. See p. 224.

SHOP FITTINGS.

DOORWAY show-case, with plate-glass shelves. Offers, CROUCH, 47 Gresham Street, E.C.

MISCELLANEOUS.

53 CAPSICUM plasters, 7 by 5, 6*s*. 6*d*.; 14 Formawn, 3*s*. 6*d*.; 6 Formawn inhalers, 4*s*. 6*d*. WILSON & BAIN, Hawick.

IVORY electroplated double stethoscope; gross Sparklet empty bulbs. Offers, WEBSTER, 298 High Street, West Bromwich.

DARWIN autographs, from 7*s*. 6*d*.; Livingstone, 25*s*.; Becker's chemical balance, mahogany drawer and weights. BAXTER, Barcaldine, Bromley, Kent.

OVERSTOCKED.—Three 4-oz. bottles (unopened) Howards' quinine, 11*d*. oz.; the *C. & D. Diary* from 1875 forward; what offers? 141/8, Office of this Paper.

WHAT offers for a veterinary surgeon's medicine-chest, fitted by Savory & Moore for the late Sir John Blundell Maple, Bart.; also cast iron bell-shape mortar and pestle, cost 29*s*., as Maw's list No. 14. SEEDHOUSE, Chemist, Newmarket.

2 LB. tincture ergot. ammon.; 2 drms. aconitia; 5-grain pill-machine; copper evaporating dish, diameter 23 in.; 10-gal. copper carboy; 2-gal. show carboys; Pomet's "History Drugs," 1748; "New London Dispensatory," 1676. HOPWOOD, Richmond, Surrey.

CASH or exchange.—Offers.—One each 7-guinea ½-pl. C.K., 3 C.K., 1 and 2 pocket Cyko, 4 Panoram, 15 by 12 Koresco enlarger, Veedee vibrator; 8th and 11th Martindale, 16th Squire; 1905 and 1909 *C. & D. Diary*; 1909 "B. & C. Diary"; Savar's coca wine; Hearn's cure; Werdyma; Diastol; Kchotah tea; Haudyside's snuff and pills; Cheltine biscuits; Rheumsol; Zeemo; Lasson's elixir; Izal embrocation; Dodds's, Johnson's, Stuart's, and Lactopeptine tablets; Dalby's carminative; Captol; Cuticura resolvent; Rankin's essence senna; Blumendorp's specific; Cros' hæmoglofer granules; about 120 odd *C. & D.* and "B. & C. D."; 12 Ozonia; 24 Rankin's ointment. SMITH, Chemist, Durham.

WANTED.

TRIAL and facial measure sets. 141/39, Office of this Paper.

PLATINUM, crucibles, wire, foil; full value remitted. ROWSELL, 11 Crebor Street, Dulwich.

C. & D. DIARY for 1906. Send price to "NEMO," 39 St. Stephen's Avenue, Shepherd's Bush.

MACKINNEY and Taylor's "Key to Sight-testing." "T. H. R." (139/04), Office of this Paper.

RANGE of drawers, 12 ft. by 3 ft., or near; labelled or otherwise. WYATT, Broadway, Morflake.

COPY of James L. Hatrick & Co.'s surgical-instrument catalogue, 1906 edition. 138/11, Office of this Paper.

MINOR, Major, Chemists' books.—Send prepaid for valuation; cash offers per return. GOWER, Bookseller, Waterloo, Liverpool.

EXTRACTS, cimicifugæ, cannabis indicæ, santonine, pulv. ipecac., Squire's latest edition, bismuth carb. CALOW, Esplanade, Redcar.

ADDRESSES WANTED.

MISS WELSH, late of Richmond.—Prescriptions signed J.R.W. or H.R.W. HOPWOOD, Richmond, Surrey.

MARSHALL'S, LIM.,

Colebrooke Works, N.

Telephone: 833 City.

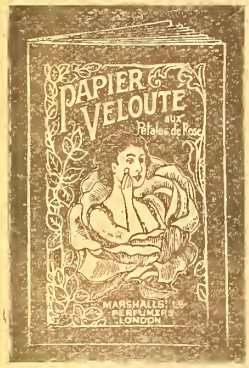


MARSHALL'S REEL FLY CATCHER.

BEST IN THE MARKET.
SELLS AT SIGHT.
6/6 gross. Carriage Paid



TOILET CREAMS. 3/6 and 5/6 dozen. NEAT GOLD BLOCKED JARS.



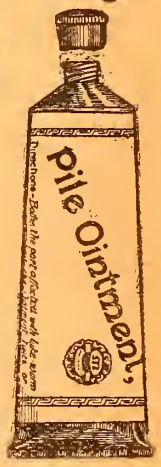
Powder Leaflets, **15/-, 24/-** gross (90 leaves.)

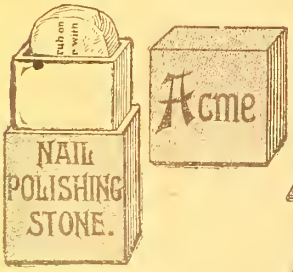
18/- per gross.



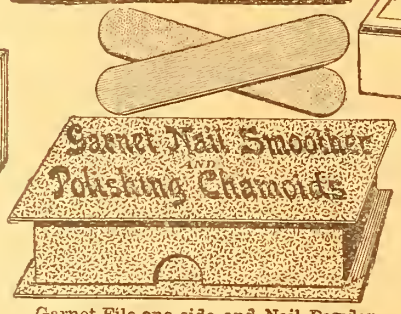
3/6 box of 1 doz., assorted Tints.







3/- doz.



Garnet File one side and Nail Powder Chamois the other.
1 doz. in box, **5/-** doz. boxes.

OZONE RIBBON
For Fumigating and Perfuming.
Destroys Insects.
2/6 doz.



PILE OINTMENT.
An efficacious preparation prepared with witch hazel, neatly packed in 1 oz. tubes, cartoned, complete with tubes, **7/6** doz.; spare tubes **3/-** doz.

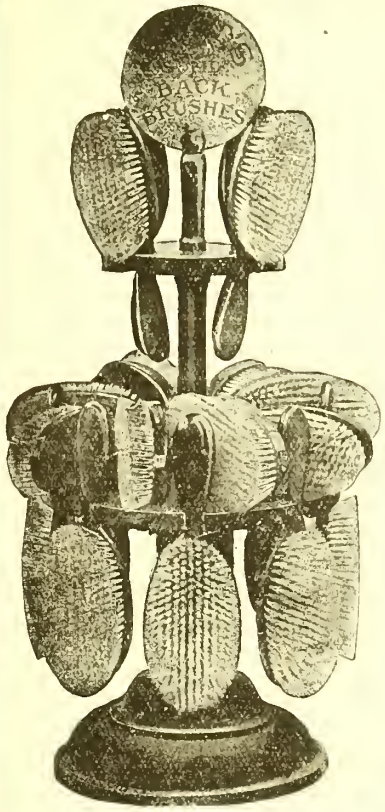


COLLAPSIBLE TUBES

OF ALL KINDS.

Adeps Lanæ, Anhydrous, Odourless, **10d.** per lb.

Printed for the Proprietors by Spottiswoode & Co. Ltd., New-street Square, and published by the Proprietors at 42 Cannon Street, in the City of London.—*July* 31, 1909.



KENT'S "PEARS."

Made at our Apsley Factory by Patent Machinery in Five Woods:

P urdah. **E** bony. **A** Yellow. **R** osewood. **S** atinwood.

G 201.	11 row, Low Cut, White Bristle	18/6
G 210.	11 row, Low Cut, White Bristle	20/-
G 211.	13 row, Low Cut, White Bristle	23/-
G 215.	11 row, Mid. Cut, White Bristle	26/-
G 216.	13 row, Mid. Cut, White Bristle	33/-
G 220.	11 row, Low Cut, White Bristle	15/-

Made in Purdah and Yellow Wood only. Satinwood 1/6 extra.

TWO NEW PATTERNS.

With Long Bristle, for Ladies, Long Oval Pattern.

G 230.	10 row, White Bristle	28/-
G 231.	12 row, White Bristle	32/-

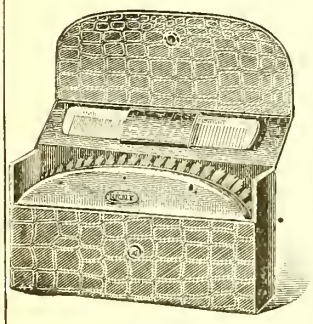
SOLID BACK MILITARY

G 10.	11 row, Low Cut, White Bristle	per dozen	20/-
G 11.	13 row, Low Cut, White Bristle	,,	23/-
G 15.	11 row, Mid. Cut, White Bristle	,,	26/-
G 16.	13 row, Mid. Cut, White Bristle	,,	33/-

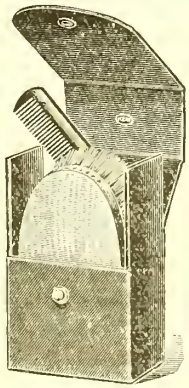
EBONY, **3/-** per dozen extra. If Ebony dull polished, **5/-** per dozen extra.

Handsome Revolving Polished Mahogany Show Stand to Exhibit these Brushes, 10/6 each.

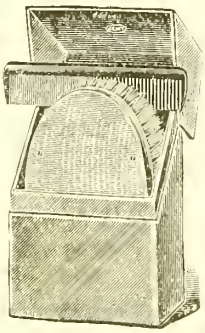
A GOOD SERVICEABLE ARTICLE AT A LOW PRICE.



S600 AND 995.



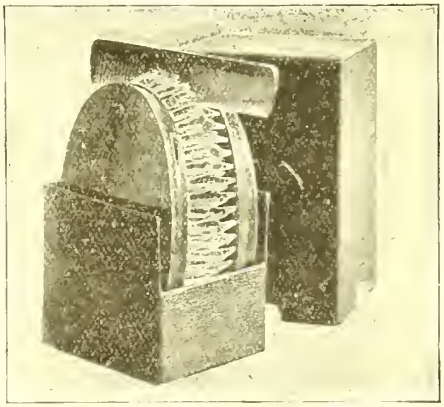
SG10, 11 AND 15.



S98.

NEW STYLE SINGLE CARTON, containing Brush and Comb.

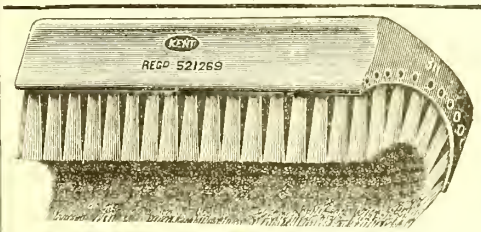
No. S98. **3/3** each.	No. S995. **2/2** each.	No. SG11. **2/6** each.
No. S600. **3/3** each.	No. SG10. **2/3** each.	No. SG15. **2/9** each.



TWO BRUSHES AND COMB.

No. 42. **2 -** per Carton.	No. 930. **3 4** per Carton.
No. 43. **2 4** per Carton.	No. 990. **3 8** per Carton.
No. 44. **2 8** per Carton.	No. 103. **5 11** per Carton.
No. 52. **5 1** per Carton.	No. Z44. **3 10** per Carton.
No. 62. **5 5** per Carton.	No. Z68 **5 -** per Carton.

No. Z69. **4 2** per Carton.



THE "KNUCKLE" NAIL BRUSH.

No. 300.	Stiff Bristle 8-row	**15s.** per dozen.
No. 301.	Stiff Bristle 10-row	**18s.** per dozen.
No. 310.	Extra Stiff Bristle 8-row ...	**24s.** per dozen.
No. 311.	Extra Stiff Bristle 10-row ...	**30s.** per dozen.

Full Illustrated Catalogue on application to 75 FARRINGDON ROAD, E.C.

BEST BRITISH BRUSHES



GOOD VALUE. ***GOOD PROFITS.***

JOHN STRANGE WINTER'S

TOILET PREPARATIONS.

These successful preparations, invented by "JOHN STRANGE WINTER" (Mrs. Stannard), the well-known novelist, and sold under her personal control by J.S.W. Preparations, Ltd., carry good profits, and interest and satisfy all users.

A New J.S.W. Preparation

PARFUM MARQUISE.

A CHOICE PERFUME.

7/6 per bottle.

FREE OFFER.

A handsome card carrying 6 tubes of Mandarin Cream will be sent **free of cost** to any chemist naming this advertisement within one month.

TRADE MARK.



"Since using the Hair Food I have growa into a Persian."

On P.A.T.A. List.

WRITE TO-DAY

For Trade Price List and new Booklet to

"JOHN STRANGE WINTER"

YORK HOUSE,

HURLINGHAM, LONDON, S.W.

FOR THE HAIR.

JOHN STRANGE WINTER'S HAIR FOOD.
A marvellous hair grower. (2/6 per bottle.)

AMBERINE.
A rich stimulant. (3/6 per bottle).

KARMALAK.
A delightful dressing. (2/6 per bottle.)

TEMPLE CREAM.
For Bare Temples, &c. (2/6 per bottle.)

No. 1315.
A non-oily special tonic. (3/6 per bottle.)

RADINE.
For special cases. (5/- per bottle.)

FOR THE SKIN.

LAKSHMÎ.
A perfect skin lotion. (2/6 per bottle.)

LAKSHMÎ CREAM.
Consolidated Lakshmi. (2/6 per pot.)

CRÈME MARQUISE.
An exquisite skin cream. (1/- and 2/6.)

MANDARIN CREAM.
An everyday face cream. (6d. and 2/6.)

NORWEGIAN CREAM.
For blackheads, Insect bites, &c. (2/6 per pot.)

POUDRE MARQUISE.
A delicate face powder. 6 tints. (2/6 per box.)

PÊCHE MARQUISE.
The new liquid rouge. (1/- per bottle.)

TOILET SALT.
A perfect water-softener. (1/6 per box.)

SAVON MARQUISE.
An ideal soap. (2/6 per box; three cakes.)

SHAVING STICKS.
(1/- each.)

LAKSHMÎ SOAP.
(1/6 per box; three cakes.)

&c.. &c.

AWARDED FIVE GOLD MEDALS.

LONDON, PARIS & VIENNA.

Testimonials:

Mrs. STANNARD has been honoured by permission from the following distinguished Ladies and Gentlemen to quote their names as users of her preparations.

THE LADY GUENDOLEN RAMSDEN.
THE COUNTESS OF ROTHES.
THE COUNTESS COWLEY.
THE LADY MARY WENTWORTH-FITZWILLIAM.
THE VISCOUNTESS BRIDPORT.
THE LADY SIBYL FINDLAY.
THE HON. Mrs. CODRINGTON.
THE HON. Mrs. COLVILE.
THE HON. Mrs. HENNIKER-MAJOR.
THE HON. Mrs. BATEMAN.
THE HON. ROSE BOOTLE-WILBRAHAM.
THE HON. Mrs. ERRINGTON.
THE HON. Mrs. HERBERT, of Lanarth.
THE HON. EVELYN CUNLIFFE-LISTER.
LADY SETON.
THE DOWAGER LADY BARCLAY.
LADY EDEN.
LADY CAVAGNARI.
LADY WHITE.
LADY PILKINGTON.
Mrs. T. P. O'CONNOR.
Mrs. DANIEL O'CONNELL.
MADAME ELVEY.
Miss MAUDE HOBSON.
Miss ELSIE CHESTER.
Miss NANCY PRICE.
Miss KITTY MASON.
Mr. CHARLES SASSOON.
Mr. DAVID CHARLES SASSOON.
Mr. CYRIL MAUDE.
Mr. GEORGE GIDDENS.
Mr. ARTHUR HOLMES-GORE.
Mr. CHARLES LANDER.
Mr. ALFRED PRAGA.
Mr. HERMANN KLEIN.

and many others.

Wholesale Agents: BURGOYNE, BURBIDGES & CO., 12 COLEMAN STREET, LONDON, E.C.
Australasia: THE JOHN STRANGE WINTER CO., 82 PITT STREET, SYDNEY, N.S.W., and 22 NATHAN'S BUILDINGS, WELLINGTON, N.Z.





12/- and 20/- per doz.





3/9 and 7/- per doz.

MAW'S
SUPERIOR
TOOTH PASTES

In Earthenware Pots with Burnt-in Labels.

SPECIAL QUOTATIONS FOR QUANTITIES.

SHOW CARDS.



3/9 and 7/- per doz.



3/9 and 7/- per doz.



3/9 and 7/- per doz.



3/9 and 7/- per doz.



3/9 and 7/- per doz.



3/9 per doz.





S. MAW, SON & SONS, 7-12 Aldersgate Street, **LONDON, E.C.**

Telegrams: "ELEVEN LONDON." Telephone No.: 3230 LONDON WALL (4 lines).

Francis Newbery & Sons. Ltd.

MANUFACTURING CHEMISTS.

TOOTH POWDERS "par excellence."

Thymol,
Parma Violet,
Cherry,



Carbolic,
White Clove,
&c., &c.

and

Poudre Dentifrice à la Menthe (A NEW LINE)

Small at **25/3**: Medium at **31/6**: Large at **42/-** 5 %

NEW AND ELEGANT TOILET LINES

Eau de Toilette
Eau de Quinine
Bay Rum
Antiseptic Dentifrice

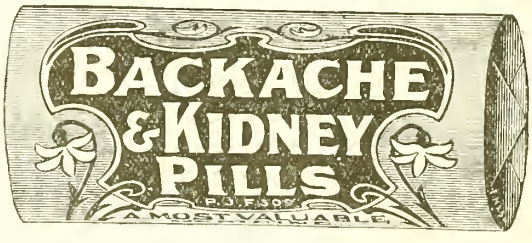


Jaborandi Hair Tonic
Rosemary and
Cantharidine Hair Wash.
etc., etc.

7/10 per dozen. 5 %.

Our "NEW POPULAR" Pill Series.

Apiol & Steel Pills
Backache & Kidney Pills
Damiana & Phosphorus Tablets
Gout & Rheumatic Pills



Improved Bile Pills
Nerve Pills
Steel & Pennyroyal Pills
Tonic Anæmia Pills
Toothache & Neuralgia Pills

3/6 per dozen, **36/-** per gross (assorted or not) nett.

New Shampoo Powders
Delicately Perfumed. Prettily Designed Envelopes.
1d. at 6/4 gross. 2d. at 12/8 gross.

A SURE SELLER. Hygienic
Children's Shampoo Powders.
1d. at 6/4 per gross.

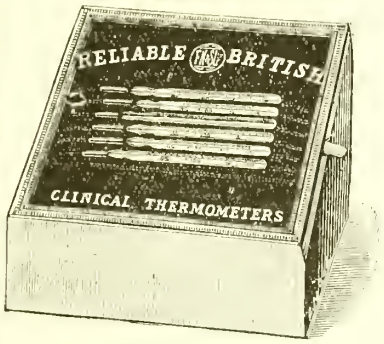
NAME, &c., OF CUSTOMER PRINTED ON LABELS AS DESIRED.

27 & 28 Charterhouse Square, London, E.C.

Francis Newbery & Sons., Ltd. (ESTABLISHED 163 YEARS.)

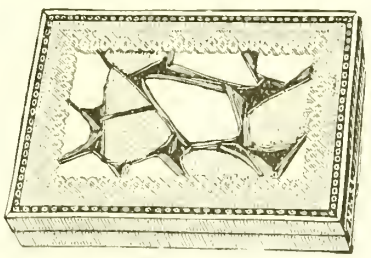
Druggists' Sundriesmen, Photographic Dealers, &c.

27 & 28 Charterhouse Square, London, E.C.



Ordinary	2	minute	7/3
,,	1	,, ...	9 6
,,	½	,, ...	10 3
Lens,	2	,, ...	11 -
,,	1	,, ...	12 3
,,	½	,, ...	14 3

British make. Above case given with an order for 3 dozen Clinicals.



Prepared Pumice Stone.

In Glass Top Boxes

-/3	...	Per doz. ...	1/9
-/6	...	,, ...	2 9
-/6	Super	,, ...	3/3



Counter Case of 2 dozen Super Galalith Fine Teeth Combs.

Per case **7/6**

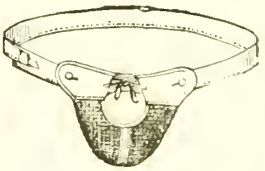


For use after Shaving.

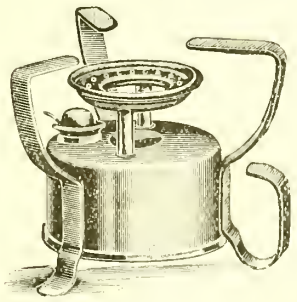
-/6 size	...	3 9
1/- ,,	...	5 -



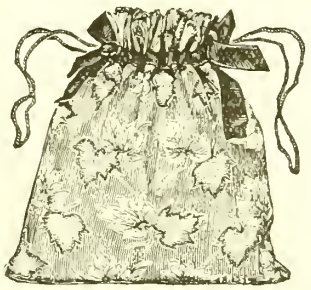
This brush appeals to a numerous class, and sells freely where shown. Each in Carton. Per dozen, **4 3**



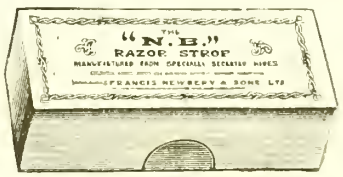
1/- line	No. 61	Per doz. 7 6
2/6 ,,	No. 352 ...	15 -



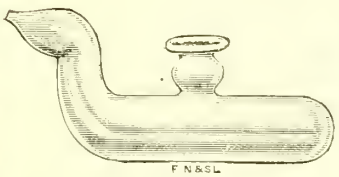
The Reform Spirit Stove.
Per dozen ... 14/-



The "Elsie" Sponge Bags.
A fine 1/- line. Per dozen, 8/-



A superior Razor Strop, specially prepared.
The "N.B." Per dozen, **18 -**

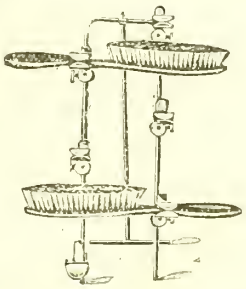


Nasal Douche.

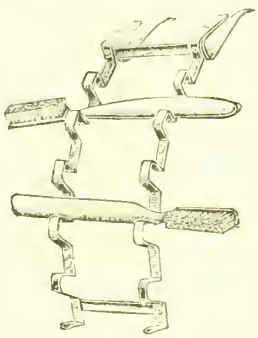
All Glass, each in box
Per dozen, **3 9**



Sprinkler tins of Carbolic Tooth Powder. Per doz. **3/9**



British made. To display 6 Hair Brushes. Shows them in any position. No. 7017, each **3 4**



Our No. 43 Rack which clips on the edge of a glass shelf. Per dozen, **5/-**

All prices on this page are subject to 5% discount for cash at one month.

W. EDWARDS & SON,

157 Queen Victoria Street, 239 & 240 Upper Thames Street,

LONDON, E.C.

WHOLESALE AND EXPORT DEALERS IN

Proprietary Medicines & Druggists' Sundries

English, American, French, &c.

SOLE AGENTS FOR ROCHE'S HERBAL EMBROCATION,

Burchell's Anodyne Necklaces; Ford's Balsam of Horehound; Bertelli's Catramin Pills, &c.; Bovinine, a perfect Invalids' Food; Pacita, remedy for Horses, Dogs, &c.; Balm of Bethesda; C. & A. Oldridge's Balm of Columbia; Gombault's Veterinary Preparations; the Oleusaban Eucalyptus Disinfectants; Clark's Neuralgic Tincture; Ibeson's Foot Rot Ointment; Woolley's Candy; Digena Tea; Nolene Preparations; Seymour, Hamilton & Co.'s Preparations.

Special Agents for the Concentrated Liquors and other preparations of Messrs. Fletcher & Fletcher.

PRICE LISTS SENT ON APPLICATION.
ORDERS CAREFULLY AND PROMPTLY EXECUTED.
Telegraphic Address—"MEDICINES LONDON."

Agencies undertaken on advantageous terms for Proprietary Articles and other goods.
Telephones No. 285 BANK & No. 5698 Central.

TO USERS and DEALERS in METH. SPIRIT and SPIRIT OF WINE.

FOR QUOTATIONS apply to—

PRESTON'S LIVERPOOL DISTILLERY Co., Ld.

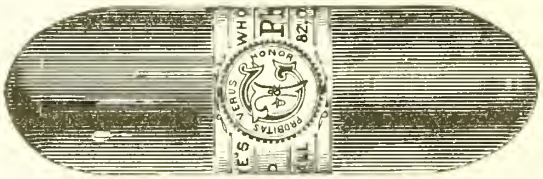
The Largest Makers in the Kingdom.

BANKHALL DISTILLERY, SANDHILLS, LIVERPOOL. Office: 4 India B'ngs, Water St., Liverpool.

WALKER, TROKE & CO.

WHOLESALE DRUGGISTS,
(late 65) Bath St., City Road,
LONDON, E.C.
Telephone: "3593 CENTRAL."

GELATINE-COATED DOG & FOWL PILLS. *Samples Free.*



SOLE MAKERS OF
GABRIEL & TROKE'S
GELATINE CAPSULED
HORSE BALLS
Alterative, Condition, Cordial, Cough, Diuretic, Fever, Physic, Worm, Quinine, Tonic Balls (Registered 81,291).

Sole Makers of **'SANOGEN VAPORISER'** (Reg. No. 21,772), for **WHOOPING COUGH, ASTHMA, &c.** Retail Price **2/6** (subj. to dis.)

LAVONA DE COMPOSÉE

AND

FLOWERS OF OXZOIN

ARE REDUCED IN PRICE

TO-KALON PERFUME (French Fon Fleur)

is now put up in 2 dram as well as 1 oz. bottles.

Obtainable from all the Leading Wholesale Houses.

ALL OUR GOODS ARE ON THE P.A.T.A. LIST.

TO-KALON MANUFACTURING CO.

Albion House, 61 New Oxford Street, London, W.C.

Burrough's Finest

S O.P. **58** **V** O.P. **60** **R**

AT LOWEST PRICES.

Special quotations for all strengths to ***absolute alcohol*** *on application. Duty free for Export and for Industrial and Scientific Purposes.*

S O.P. **61** **V** O.P. **64** **M**

AND FINISH

White in Colour and unusually free from unpleasantness.

MEAT AND MALT, QUININE AND OTHER WINES.
OUR RED CROSS WHISKIES MERIT YOUR ATTENTION.

JAMES BURROUGH LTD.

Estab. at Chelsea 1820.

CALE DISTILLERY LAMBETH S.E.

Write for Present Prices.



A

WE "Specialise" in Health Salt, Salines, Citrates, and other Effervescing Preparations, and our friends can always rely upon receiving Preparations of the very highest quality, elegantly mounted, at moderate prices.



C



E



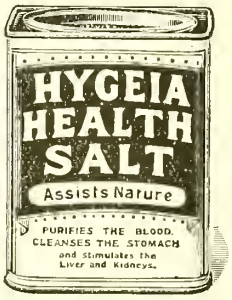
B



D



E



F

2/6 doz., **27/6** gross. Less usual discount.
Name on 1 gross Free.



G

FRUIT SALINE

Finest Possible Quality.

Packed in 8-oz. White Stoppered Saline Bottles, in Cartons with artistic Lithographed Wrapper.

7/6 doz. 6 doz. **7/-** 12 doz. **6/6**

Less usual discount.

Name on 3 dozen Free.



H



2/6 doz., **27/6** gross.
Name on 1 gross.

2/9 doz.



30/- gross.

"SILVER CASCADE" BRAND.

"Makes 2 gallons of delicious and wholesome beverage."

In the following varieties: LEMON, PINEAPPLE, GINGER, LIME, RASPBERRY, STRAWBERRY, and TANGERINE.

Name on 3 dozen Free.

Samples Free. *Correspondence Invited.*



2/6 doz., **27/6** gross.
Name on 1 gross Free.

Ayrton, Saunders & Co., Ltd., Wholesale & Export Druggists and Manufacturing Chemists,

34 Hanover Street, Liverpool.

70 YEARS OLD

AND NO INTENTION OF APPLYING FOR AN

OLD AGE PENSION!

1839—1909.

This year we celebrate our 70th birthday, and we wish to thank most sincerely our many friends in the Chemist-Druggist Trades for their hearty support and patronage during the past years. We are proud to number amongst the thousands of customers we have to-day many of those who purchased our "little round red pill boxes" 70 years ago, and whilst times have changed, and we with time, yet we are glad to say it has always been for something better; each year has found us, at its close, with a larger experience, better equipped, and giving a better service to our friends, until to-day with our splendid organisation, our six factories, all filled with modern machinery, and worked by over 1,300 employees, we feel we can appeal to you with greater confidence than ever for a further and larger share of your patronage.

Yours respectfully,

ROBINSON & SONS, LTD.

Wheatbridge Mills, Chesterfield.

Surgical Dressings

On the Official List of
CONTRACTORS to the ADMIRALTY,
WAR OFFICE, and INDIA OFFICE.

Our Dressings are supplied to almost every Hospital throughout the Country.

No better Testimonial possible.

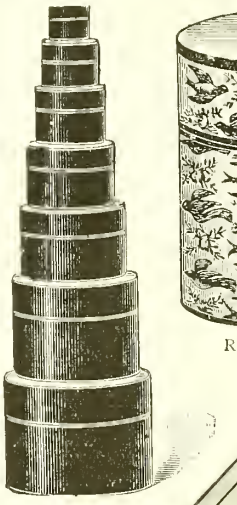
Cardboard Boxes.

Round, Oval, Square,
Folding, Plain, Printed,
or Lithographed.

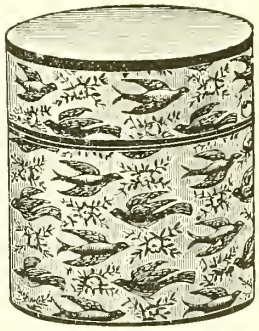
Send us your next enquiry!



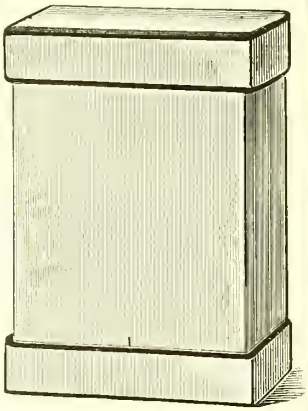
Patent D Fastener Folding Case.



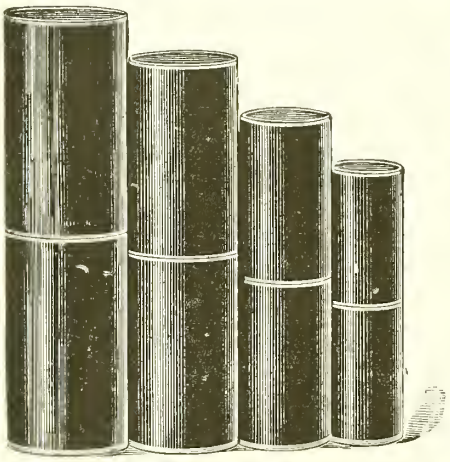
Pill Boxes.



Round Bird Pattern
Fullers Earth.



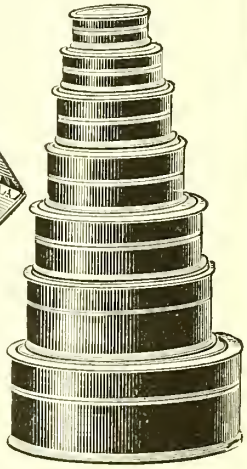
Square Pillar-shaped
Violet Powder



Purple Shouldered Bottle Cases.



Metal-Edged Box.



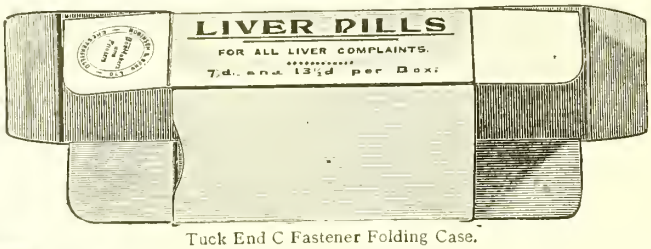
Flanged Pill Boxes.



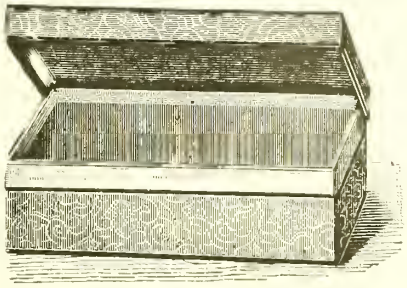
Dispensing Powder Slide.



Round Drum Shape
Violet Powder.

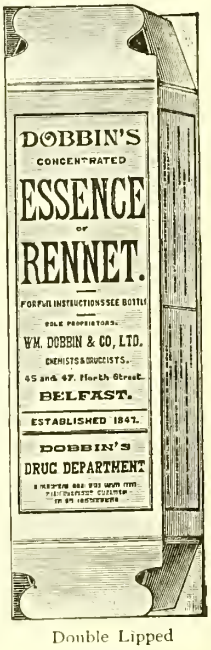


Tuck End C Fastener Folding Case.



Seidlitz Powder Box, Shouldered and Hinged.

OUR PATENT "SAFETY" POSTAL BOX should be seen and used by all whose business makes it necessary to send quantities of fragile or other goods through the post.



Double Lipped
A Fastener.

If you require a Cardboard Box for anything, please write for Samples and Prices.

SURGICAL DRESSINGS

ABSORBENT COTTON LINTS, FLAX LINTS, ROLL BANDAGES, COTTON WOOLS, GAUZE,

MANUFACTURED BY

ROBINSON & SONS, Ltd.,

Cotton Spinners, Weavers, and Bleachers,

WHEAT BRIDGE MILLS, CHESTERFIELD, & 55 FANN STREET, ALDERSGATE STREET, LONDON, E.C.

REGISTERED.

"GAMGEE TISSUE."

ESTABLISHED 1839.

We are the only Surgical Dressing Manufacturers in the World who Spin, Weave, Bleach, and Manufacture from the Raw Cotton.

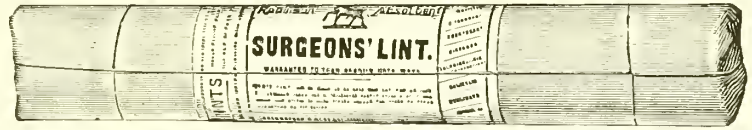
ROBINSON'S DRESSING (PATENT),

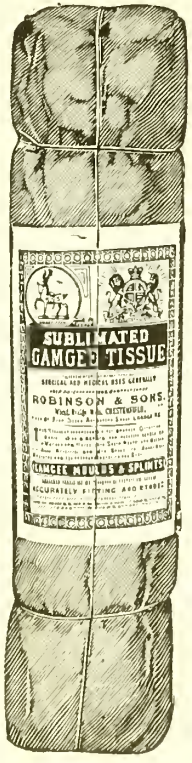
And all kinds of

ANTISEPTIC DRESSINGS.

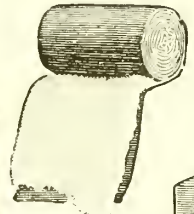
SANITARY TOWELS for Ladies.

Speciality:— MENE TOWELS.

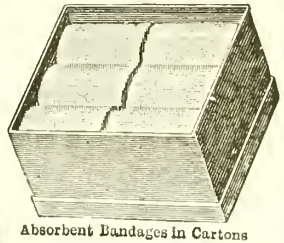








Absorbent Cotton in Tissue Paper.

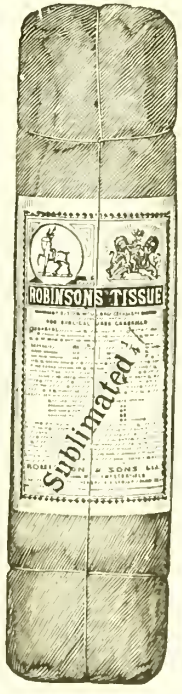


Absorbent Bandages in Cartons

Absorbent Cotton in Cartons.



Air-tight Case Antiseptic Gauze.



Prices and Free Samples on Application.

ASK FOR ROBINSON'S "STAG" BRAND WHEN ORDERING FROM THE WHOLESALE HOUSES.

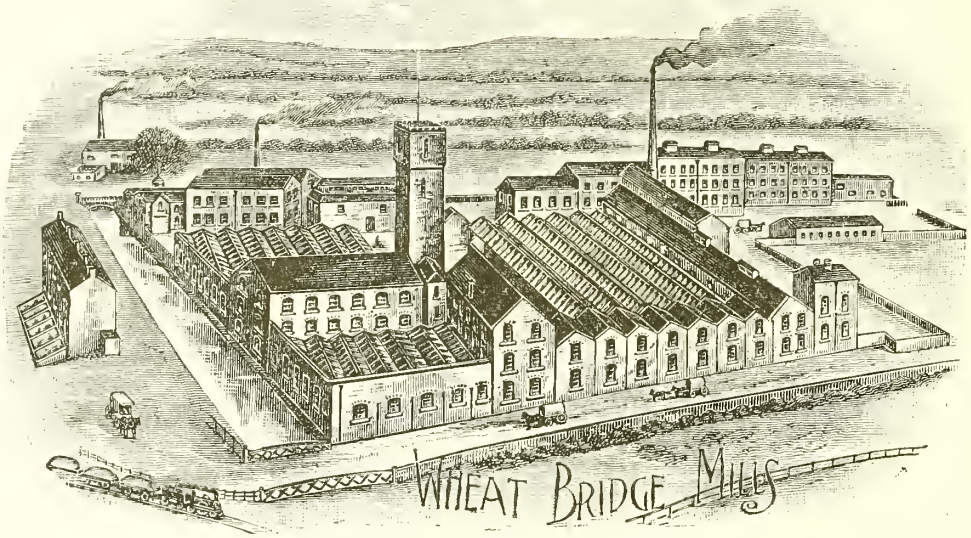
ESTABLISHED 1839.

ROBINSON & SONS, LTD.,

Wheat Bridge Mills and Holme Brook Works, CHESTERFIELD.

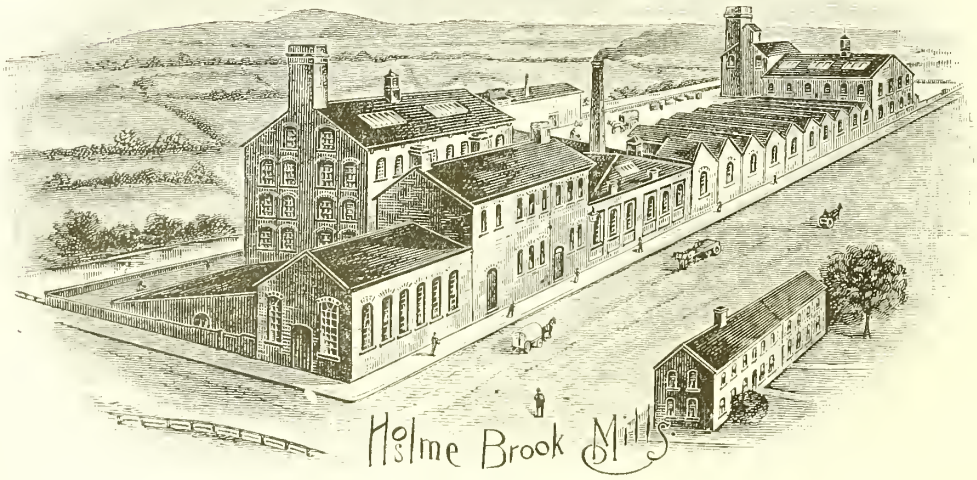
Telegraphic Address: "STAGLINT." *Telephone No. 5.* *A.B.C. Code.*

London Warehouse: 55, Fann Street, Aldersgate Street, E.C.



SURGICAL DRESSINGS & ROUND BOX DEPARTMENT.

SPINNING, WEAVING, BLEACHING AND MANUFACTURING.



SQUARE AND FOLDING BOX DEPARTMENT.

Lithographic and Letterpress Printing, Gold Blocking, &c.

SUPERLATIVE VALUE IN SALEABLE TOILET GOODS AND SIDE-LINES AT

CHRISTY'S

ROSE POTS.



Most dainty and sensible containers for Toilet Creams, beautifully designed and finished in colour. Handy in use and after.

EACH IN BOX

Appeal to all who use creams. Worthy of any toilet table. Supplied with Lanoline, Benzoin, Cold, Elderflower, Cucumber Creams, &c.

FILLED 7/3 DOZEN

BORAN.

Freckle Cream. Scientifically prepared and entirely different from ordinary toilet Creams. Trial ½ dozen, 4/-

1s. tubes, 7/3 dozen.

WOLTAT.

The Foot Shampoo that has proved a decided seller. New show card ready. Appeals to all, at all seasons.

3d. packets, 18/- gross.

SECTARE.

For Insect bites. In blue pocket dropper bottles. Unusually neat and saleable. Striking mosquito poster in preparation.

6d. retail, 4/- dozen.

SHAVING CREAM.

In art ceramic ware pots worthy of the best pharmacy; useful after as trinket tidies. Cream acknowledged unequalled.

1/- retail, 7/3 dozen.

PROPRIETARY CARBOLICS.



Name printed **DIRECT ON METAL** for 1 gross order.

Clean and permanent.

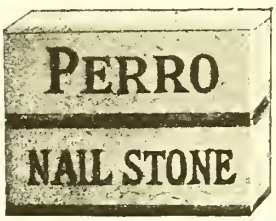
Style and quality guaranteed.

Write for Specimen Sheet.

15/- to 24/- A GROSS.

A BRILLIANT LINE.

Quite the daintiest, cheapest, and most saleable nailstone out. In Wedgwood and gold boxes on stoneware cards of a dozen.



NEW ILLUMINATED CARDS READY.

P.A.T.A. 7½d. **4/6** DOZEN.

SAMPLES SUPPLIED.

THOS. CHRISTY & Co
OLD SWAN LANE, LONDON, E.C.

ENQUIRIES INVITED.

We are again compelled to remind Pharmacists and others connected with the Drug Trade all over the world that

"VASELINE"

is the registered trade mark of the

CHESEBROUGH MFG. CO.

(CONSOLIDATED)

OF NEW YORK.

There is only one product that can rightly be called "Vaseline," and it is manufactured by this Company. A complete list of the Vaseline products sent on application.

42 Holborn Viaduct, London, E.C.

S&H Essence of STONE GINGER BEER



PRODUCES

GINGER BEER

BY SIMPLE AERATION EQUAL IN EVERY RESPECT TO THE BEST

Brewed Ginger Beer

THIS ESSENCE IS ALSO SUITABLE FOR

BREWED GINGER BEER

AS DEMONSTRATED AT THE BREWER'S EXHIBITION 1908, WHEN IN THE NON-ALCOHOLIC BEVERAGE COMPETITION.

THE FIRST PRIZE

(GOLD MEDAL)

WAS AWARDED TO FERMENTED GINGER BEER BREWED *(NOT AERATED)* FROM THIS ESSENCE.

RECIPES OF BOTH PROCESSES ON APPLICATION.

STEVENSON & HOWELL LD., SOUTHWARK ST., LONDON. S.E.





STEVENSON & HOWELL'S

SOLUBLE ESSENCE OF

LIME JUICE & SODA

MAKES A PERFECT AERATED BEVERAGE
& A DELICIOUS SYRUP.

VERY ECONOMICAL IN USE
½ FLUID OZ TO A GALLON OF SYRUP
A FINE NATURAL DELICIOUS
FRUIT FLAVOUR.

RESERVED TO CHEMISTS ONLY.

"Erasmic"

WINDOW DISPLAY COMPETITION

April 1st, 1909, to August 31st, 1909.

CASH PRIZES £250

1st Prize	- -	**£50**	
2nd ,,	- -	**25**	
3rd ,,	- -	**10**	
4th ,,	- -	5	
5th ,,	- -	5	
6th ,,	- -	5	
7th ,,	- -	5	
8th Prize	- -	£5	
9th ,,	- -	5	
10th ,,	- -	5	
50 Prizes at £1 each		50	
160 ,, at 10/- ,,		80	
		£250	

220—PRIZES IN ALL—220

The first prize of £50 may be yours—WHY NOT TRY FOR IT?

For particulars and special cash bonus terms for displays, see other side.

A SURE SOURCE OF PROFIT!

A

WINDOW DISPLAY

OF

"ERASMIC" SOAP

NO CUTTING. ***Protected Prices on P.A.T.A.***

With a view of still further increasing sales of our "Erasmic" Soaps we are open to arrange (for a limited period only) Window Displays on the following exceptional terms:

"A" Display.

CASH BONUS 20/-

	£	s.	d.
3 gross Tablets "Peerless" or "Elite" Erasmic Boxed @ 40/-	6	0	0
2 gross do. do. Loose @ 38/6	3	17	0
	9	17	0
Less 5 % Discount		9	10
	£9	7	2
Less Display Allowance	1	0	0
Nett	£8	7	2

"B" Display.

CASH BONUS 10/-

	£	s.	d.
2 gross Tablets "Peerless" or "Elite" Erasmic Boxed @ 40/-	4	0	0
1 gross do. do. Loose @ 38/6	1	18	6
	5	18	6
Less 5 % Discount		5	10
	£5	12	8
Less Display Allowance		10	0
Nett	£5	2	8

The press advertising of "Erasmic" will be still further increased during 1909. We therefore hope you will reap the benefit of this expenditure by displaying the goods prominently to our mutual advantage.

Thanking you for your kind co-operation.

We are, yours faithfully,

The Erasmic Co., Ltd.,
WARRINGTON.

PRICE LIST ON APPLICATION.

STILL LEADING.

THE

"DUCHESS"

REGD.

2d. Toilets.

Buttermilk

Glycerine and Cucumber

Rose

Parma Violet

Oatmeal

Glycerine and Oatmeal

Old Brown Windsor

Lavender

Cold Cream



Carnation

Sweet Pea

Wallflower

Curd

Boracic

Carbolic

Coal Tar

Sulphur

FOR SALE BY CHEMISTS ONLY.

Test them by ordering one Gross Tablets (carriage paid, as sample).

MONEY BACK IF NOT APPROVED.

Agents for Crosfields' Glycerine.

The Erasmic Co., Ltd.,

WARRINGTON.

"Erasmic" Specialities.



"ERASMIC" SHAVING STICK.

BRITISH and BEST.

In Elegant Nickel Case.
Six Cartons on Stand.

Each Case in Carton.

Price 7/- per dozen.
LESS 5%

"ERASMIC" TOOTH POWDER.

ANTISEPTIC.

Preserves the Teeth.

6d. size, 3/6 per Dozen.

1/- size, 7/- per Dozen.
LESS 5%



Price 6d. and 1/- per Tin.



Price 1/- per Box.

"ERASMIC" FACE POWDER.

Exquisitely Perfumed.

PINK, WHITE, and NATURAL.

Price 7/- per Dozen.
LESS 5%

BULK EXTRACTS.
(SPECIAL OFFER.)

Having recently appointed a French Perfumer, we invite your enquiries for BULK EXTRACTS.

The Erasmic Co., Ltd., WARRINGTON.

"HARLENE HAIR DRILL"

INTRODUCING

HIGH CLASS PREPARATIONS FOR THE CARE AND CULTIVATION OF THE HAIR.



PRICE LIST.

No. 1.	"HARLENE"	4/6 size,	Wholesale	47/= per doz.
	,,	2/6 ,,	,,	27/3 ,,
	,,	1/= ,,	,,	11/= ,,
No. 2.	"CREMEX" Shampoo powder.	1/= ,,	,,	11/= ,,
No. 3.	"UZON" Brilliantine.	1/= ,,	,,	11/= ,,
		2/6 ,,	,,	27/3 ,,
No. 4.	"VIOLETTA" Skin Cream.	1/= ,,	,,	11/= ,,
		2/6 ,,	,,	27/3 ,,
No. 5.	"JUNOFLORIS" for teeth & breath.	1/3 ,,	,,	13/9 ,,
		2/9 ,,	,,	30/= ,,
No. 6.	COMBINATION PARCEL	Minimum retail price, 6/=	,,	75/= ,,
No. 7.	EXCELSIOR Hair Dyes Black, Brown, Golden.	3/6 size,	,,	29/= ,,
		5/6 ,,	,,	48/= ,,
		8/6 ,,	,,	76/6 ,,

SPECIAL. Full discount of 20% off the prices to all buyers of £2 net, cash with order.

Manufactured and produced by—

EDWARDS' HARLENE CO., 95 and 96, HIGH HOLBORN, LONDON. W.C.

PRIZES

1st £20 :
2nd £15 :
3rd £10 :
4th £7.10.0 :
5th £5 :
6th £2.10.0 :
75 Smaller Prizes.

PRIZES

Unique Window Dressing Competition.

96 Prizes value £200 offered.

SPECIAL PRIZES FOR THE ACTUAL WINDOW DRESSER.

We have pleasure in introducing to the trade generally an interesting and profitable window dressing competition and invite the Chemists' interest and co-operation.

LIST OF PRIZES.

1st Prize	= =	£20 0 0
2nd ,	= =	£15 0 0
3rd „	= =	£10 0 0
4th „	= =	£7 10 0
5th „	= =	£5 0 0
6th „	= =	£2 10 0
25 Prizes of £2 each		£50 0 0
50 „ £1 „		£50 0 0
		£160.0.0

A FURTHER SUM OF £40 will be divided in proportion amongst the actual dressers of the winning windows, whether dressed by proprietors or assistants.

The governing rules and regulations are given on the next page and should be carefully noted. Any further information can be obtained by writing direct to the Advertisement Department, 95 & 96, High Holborn, W.C.

ING COMPETITION. SEPT., 1909.

RULES AND CONDITIONS.

1. The Display to be kept in the window for four weeks from September 6th to October 4th.

2. Other productions of Edwards' Harlene Co. may be included in the display if desired. This will in no way depreciate the value of the window

3. Photographs of the dressed window must be sent to the "Harlene" Offices not later than September 12th, otherwise the Competitor will be disqualified.

4. All dummies, showcards, etc., will be sent free of charge. Requisition for these should be made out in list and forwarded with the entry form.

5. There are no entrance fees or conditions of entry for Chemists having an Account with us. To those intending Competitors who have no Account open, we desire to introduce our special £2 offer on page 4 of this inset.

6. The photographs will be judged by a Committee of expert window dressers, and prizes will be awarded to the windows shewing the most artistic and business-pulling display.

CUT OUT AND SEND THIS ENTRY FORM.

PRIZES

1st **£20**

2nd **£15**

3rd **£10**

4th **£7.10.0**

5th **£5**

6th **£2.10.0**

75 Smaller Prizes.

ENTRY FORM.

To Messrs. EDWARDS' HARLENE CO.,
95 & 96, High Holborn, London, W.C.

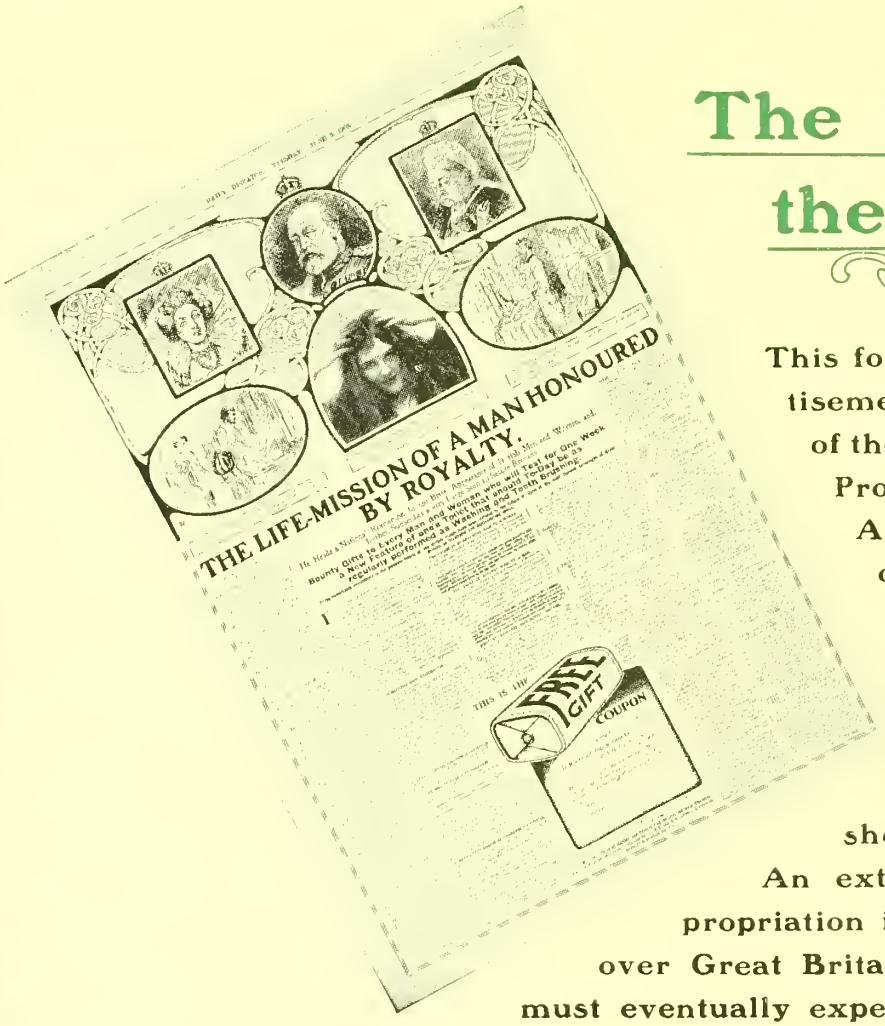
ear Sirs,

Kindly include $\frac{my}{our}$ *name in your Window Dressing Competition for September, 909, and send me the dummies, etc., as per attached list.* $\frac{I}{we}$ *fully acknowledge the bove conditions.*

Proprietor's Name

(This Entry is important.) *Dresser's Name*

PRIZES



The Power of the Press.

This forceful full page advertisement appeared in most of the principal London and Provincial Newspapers. A convincing argument of our attention to the interests of the . . . Chemist by creating a demand for "Harlene" preparations which every retailer should be prepared to meet. An extensive advertising appropriation is now being placed all over Great Britain, and every Chemist must eventually experience greater profits.

SPECIAL OFFER.

To all purchasers of a £2 parcel (net and cash with order) we will include ONE GROSS FREE SAMPLE BOTTLES for distribution. The parcel may be made up exactly to the customer's requirements.

FREE ORDER BOOKS.

We are now issuing a handy counterfoil order book in post-card form and these will be supplied free of charge upon application.

FREE WINDOW DRESSING.

We are prepared to offer our customers (in London) the services of an expert window dresser entirely free of charge. The only condition is that the centre portion of the window be devoted to the display of productions manufactured by the Company. Applications are invited and will receive prompt attention in strict rotation.

100 per cent. PROTECTED PROFIT.

A guaranteed profit of CENT per CENT is assured by buying

EUCRYL

TOOTH POWDER.

IN 3 DOZEN PARCELS.

SPECIAL BONUS OFFER in return for COUNTER DISPLAYS.

"One dozen **6d.** tins extra, free of charge, with all opening orders of **3 dozen,** and with **all** repeat orders of **6 dozen** tins, **3/6** per dozen nett, carriage paid."

To retail at **6d.** per tin.

On the P.A.T.A. list.

ORDER FORM.

To EUCRYL LIMITED,
HULL.

Please forward :—

.....*dozen 6d. tins* **Eucryl Tooth Powder** *and bonus.*

.....*Showcards.*

.....*Sample Tins.*

.....*Window Slips.*

From.....

.....

C. & D. 31/7/09.

Eucryl Tooth Powder,

Retail price, 6d. per tin ***ON THE P. A. T. A. LIST.***

100 per cent. protected profit.

The Directors of Eucryl, take this opportunity of thanking all their many friends in the Trade for their past co-operation and of assuring them, as well as those who up to the present have not taken advantage of their Bonus offer, that they have no intention whatever of withdrawing it.

Their offer has been eagerly accepted by members of the Retail Trade in all parts of the British Isles, who have realized that the deserved popularity of the Powder. and the exceptional terms secure for them a rapid and profitable turnover, and that it thus pays them to keep Eucryl Tooth Powder to the front.

The Directors on their part still recognise the valuable asset contained in the interest and friendship of the Trade, and in the obtaining and preservation of this they spare no effort.

OPENING ORDERS.

BUYING PRICE.	£	s.	d.
3 doz. 6d. tins at 3/6 - - -	0	10	6
1 doz. Free (for counter show) - - -			
Free samples, showcards, etc. - - -			
Carriage Paid	£0	10	6

SELLING PRICE.	£	s.	d.
4 doz. at 6d. - - -	1	4	0
	£1	4	0

REPEAT ORDERS.

3 doz. at 3/6 - - -	0	10	6
½ doz. Free (for counter show) - - -			
Free samples, 1 showcard, etc., - -			
Carriage Paid	£0	10	6

3½ doz. at 6d. - - -	1	1	0
	£1	1	0

Executive Offices and Factory:
ROCHESTER, NEW YORK, U.S.A.

Bausch & Lomb Optical Co.

New York, Boston, Chicago, Frankfurt a/m Germany,

LONDON.

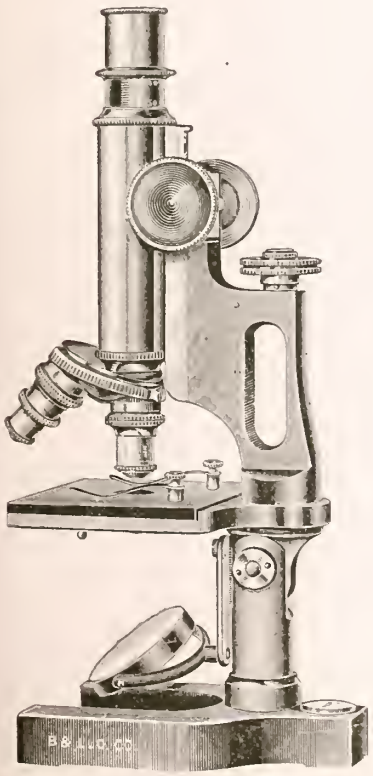
Telegrams:
OPSIOMETER,
LONDON.

Telephone:
754 CENTRAL.
Lieber's Code.

Depot for
BRITISH, COLONIAL, AFRICAN, INDIAN and SOUTH AMERICAN TRADE:

19, THAVIES INN,
HOLBORN CIRCUS,
E.C.

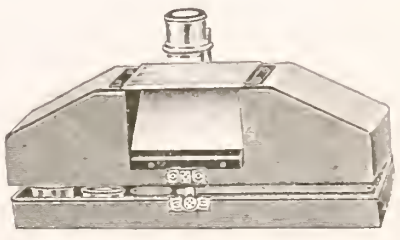
MICROSCOPES.



B.H. MICROSCOPE.
£6 5s. 9d.

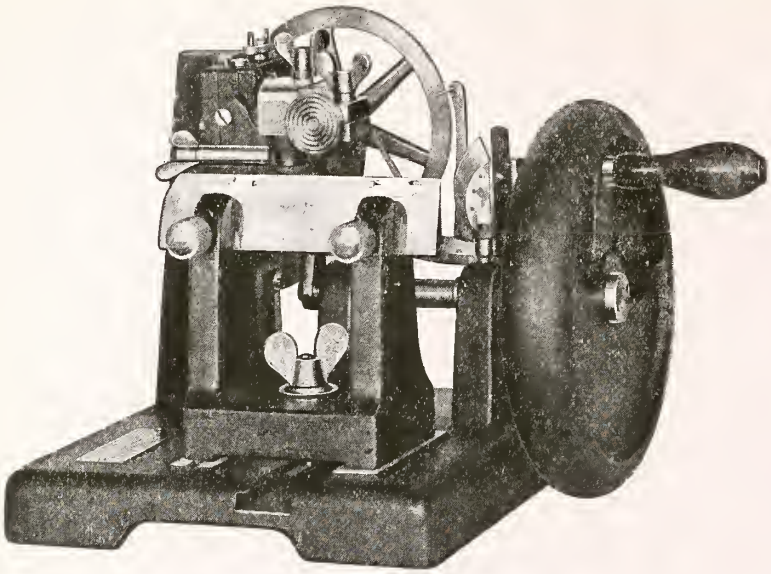
We particularly direct your attention to our large assortment of Microscopes, consisting of many new models, which have been designed at our factory after years of successful experience, by the best workpeople and machinery in the world. They are extensively used in many of the British, Colonial, Indian, United States, Russian, Japanese and Chinese Government Departments and Scientific Institutions, have been referred to by the editors of the principal text-books on the Microscope, while prices are well within the reach of the student or medical man of moderate means.

The Dissecting Microscopes are largely used by students in Forestry classes, and are popular instruments at a low price. (See the various models in our list.)



T ii DISSECTING MICROSCOPE.
12s. 3d. each.

MICROTOMES.



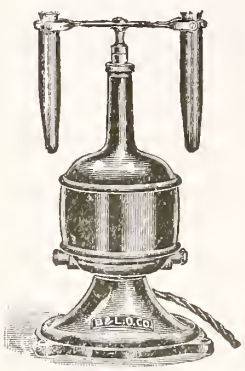
MINOT ROTARY MICROTOME.

Special Students' and Laboratory Models, popular prices and highest precision work.

£2 10s. 9d. to £25.

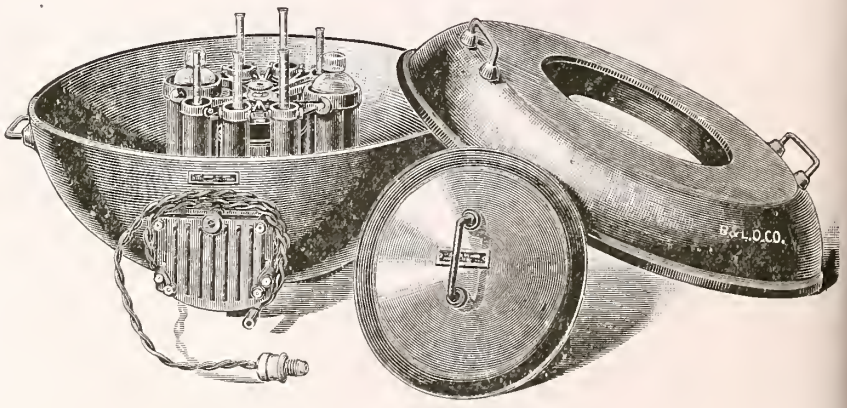
CENTRIFUGES.

These are largely used in the principal Hospitals, for urine, milk, water, and food analysis; the larger laboratory instruments for food testing in Government Departments, under the Pure Food Acts.



ELECTRICAL CENTRIFUGE.

41s. 8d. to £6 6s.

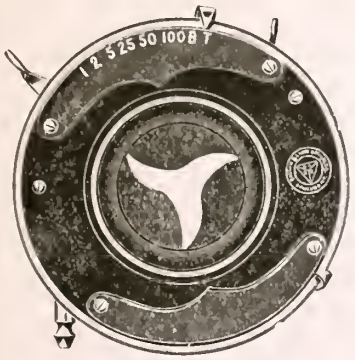


LABORATORY CENTRIFUGE.

LABORATORY GLASSWARE.

We have established in Europe our own factory for Precision Glassware for Laboratory use, to the Charlottenburg standard for exact and precise work; new list of these goods will be ready shortly.

PHOTOGRAPHIC SHUTTERS.

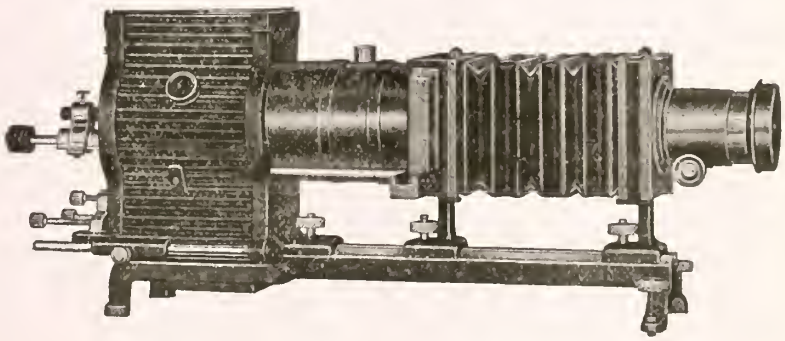


PHOTOGRAPHIC SHUTTER.

We are the largest makers in the world of Photographic Shutters, for the American, British and Continental Camera makers and Trade; our models, the Unicum, Automat, Volute, etc., being well known. The new model is illustrated in this list, and retails at **£1 1s. 0d.**

BALOPTICAN PROJECTION APPARATUS.

We make a fine set of instruments for Educational Establishments and Colleges, for direct projection; and also the new Opaque Projectors for throwing on the screen a reproduction or image of opaque substances, drawings, leaves of a book, working models of a watch, etc., etc.



BALOPTICAN PROJECTION APPARATUS.

PHOTO-MICROGRAPHIC APPARATUS.

We have a complete list of these outfits, which have given every satisfaction; they are very rigidly constructed, and are capable of producing the finest work.

ENGINEERING INSTRUMENTS.

We are makers of Engineering and Astronomical Instruments, Tide Gauges, Coast Survey Levels, Magnetometers, Transit Theodolites, Transit and Zenith Telescopes, Range Finders, etc., to the various Governments.

SPECTACLE LENSES.

CENTEX PORTEX

TRADE MARKS REGISTERED.

The well-known quality of our Spectacle Lenses will be further safeguarded by the adoption of the above titles, which have been registered, and which will be used to designate goods of a very high standard. Each packet, box and envelope used in the packing of our Lenses will bear one of the above distinguishing marks.

The CENTEX grade will be the highest quality Lens we make, unapproachable in finish, quality, and exactness of foci.

The PORTEX will be a Lens of selected colourless Crown, specially prepared optical glass, of unvarying refractive index, dispersion, hardness, and standard quality.

These Lenses will be supplied in the different descriptions: Biconvex, Biconcave, Periscopic, Meniscus, Plano and Sphero Cylinders, Toric, Uncut, etc., in the various Rimless and Bevel Edge standard sizes, for the American, British, German, and Australian standards. Our output of these Lenses last year was 25,000,000.

These Lenses will be supplied to the Trade through any of the Wholesale Optical Houses.

We shall be pleased to forward Catalogues of Microscopes, Microtomes, Centrifuges, Projection and Photo Micrographic Apparatus on application. Kindly specify which lists are required.

Tear this off and hang it up.

August, 1909.

FINDLATER & Co.,

LONDON BRIDGE, S.E.

Telegrams—"FINDLATER, LONDON." Telephone No. 161 HOP

Delivery free in London 10 mile radius. Carriage paid in United Kingdom.

Name.	Bottles. Doz.	Bottles. Original case	Half Bottles. Doz.	Half Bottles. Original case
Aix les Bains (Deux Reines	7/	50 @ 27/6	—	—
Aix les Bains (Missonat) ...	7/-	50 @ 27/6	—	—
Alet	9	50 @ 35	—	—
APENTA (splits 32/6 per 100)	10/-	25 @ 20	8/3	50 @ 32/6
Arabella	10	25 @ 19	—	—
BILIN	7/6	50 @ 28/6	4/9	100 @ 34/3
Birmenstorf	8/-	50 @ 32/	—	—
BIRRESBORN	—	50 @ 19/8	—	100 @ 27/6
,, (splits) ...	—	—	—	100 @ 22/-
Bonifacius (Salzschirf) ...	8/6	50 @ 33/8	—	—
Bonnes	10/6	50 @ 40	—	—
Bonnoule (La)	9/6	50 @ 38	—	—
Bussang	7/	50 @ 26/6	—	—
Cambrunnen	5/9	50 @ 22/	4/8	100 @ 32/-
CARABANA	9/-	25 @ 18/	7/-	50 @ 27/8
,, (in 5 case lots invoiced at one time)	—	25 @ 16/-	—	50 @ 25/-
Carlsbad	11/	50 @ 43/9	—	—
Cauterets	11/3	50 @ 44/6	—	—
Challes	11/-	50 @ 42/6	—	—
CHATEL GUYON ...	8/-	50 @ 32/6	—	—
CONDAL	—	—	10/6	50 @ 42/-
Condillac	6/	50 @ 23/	—	—
CONTREXEVILLE ...	7/6	50 @ 29/6	5/9	50 @ 23/-
Emperor Frederick ...	6/6	50 @ 24/-	5/-	100 @ 36/6
EMS	6/9	50 @ 26/6	—	—
EVIAN CACHAT	7/3	60 @ 34/3	8/3	60 @ 28/6
FACHINGEN	8/-	50 @ 30/6	6/3	50 @ 22/9
Franz Josef	10/-	25 @ 20/-	9/-	50 @ 36/-
Friedrichshall	12/3	25 @ 24/4	9/9	50 @ 39/-
GIESSHUBLER	7/2	50 @ 26/6	4/9	100 @ 34/3
Godesberger	6/6	50 @ 23/6	5/-	100 @ 35/8
Hercules	11	25 @ 19/6	—	—
Homburg (Elizabeth) ...	9/6	50 @ 38/-	—	—
HUNYADI JANOS ...	10/-	25 @ 20/-	9/-	50 @ 36/-
,, ,, (in 5 case lots)	—	25 @ 19/-	—	50 @ 34/-
Kissingen	9/-	50 @ 36/-	—	—
Kreuznach	7/8	50 @ 27/8	—	—
Krondorf	7/6	50 @ 27/6	—	—
Kronenquelle	8/6	50 @ 34/-	—	—
Levico	—	—	10/8	—
MARTIGNY (VOSGES) ...	7/6	50 @ 29/6	—	—
Mont Dore	10/-	50 @ 38/-	—	—
Montmirail	10/	50 @ 40/-	—	—
Neuenahr	8/6	50 @ 32/6	—	—
Obetbrunnen	8/3	50 @ 33/6	—	—
Orezza	10/6	30 @ 26	—	—
PERRIER	—	50 @ 19/9	—	100 @ 31/6
,, (splits)	—	—	—	100 @ 23/6
Plombières	9/3	50 @ 35/6	—	—
Poland (½ galls.)	—	24 @ 32/6	—	—
,, (quarts)	—	50 @ 32/6	—	—
POUGUES	7/6	50 @ 29/6	—	—
Renine	11/-	50 @ 42/6	—	—
Roisdorf	6/3	50 @ 23/-	5/-	100 @ 32/6
Roncegno	—	—	15/-	—
Rosbach	—	50 @ 20/-	—	100 @ 31/6
Royat St. Mart, Vict., Cés.)	7/6	50 @ 30	—	—
,, (Fonteix)	9/-	50 @ 34/6	—	—
Rubinat Llorach	14/3	25 @ 28/6	10/6	50 @ 42/-
St. Boes	12/6	50 @ 48/6	—	—
ST. GALMIER (Badoit) ...	4/9	50 @ 18/6	3/9	100 @ 29/-
,, (Romaine) ...	4/3	50 @ 17	3/4	100 @ 27/-
Salvator	9/-	50 @ 34/6	—	—
SCHLANGENBAD ...	8/-	50 @ 30	—	—
SCHWALBACH	8/-	50 @ 30	—	—
SELTERS (Nieder) ...	6/3	50 @ 23/9	—	—
,, (Ober)	5/9	50 @ 22/9	4/4	50 @ 16/2
Soultzmatt (Nessel) ...	6/6	50 @ 28/6	—	—
Tarasp	11/-	30 @ 23/6	—	—
TAUNUS	5/6	50 @ 19/-	4/-	100 @ 30/-
Teinach	—	50 @ 17/6	—	100 @ 28/-
Vals (all springs)	8/-	50 @ 31/6	—	—
VICHY (Celestins, &c.) ...	8/-	50 @ 31/4	6/-	50 @ 22/8
Villacabras	—	—	8/-	100 @ 56/-
VITTEL	8/-	50 @ 32/-	6/2	50 @ 23/9
Wiesbaden (Gicht) ...	10/-	—	—	—
WILDUNGEN	8/-	50 @ 32/-	—	—

Prompt Delivery by our own Vans.

NET CASH.

Claims for breakages (if any) should be made on the Carriers, as all packages leave our Stores in good condition.

Quotations for all other Mineral Waters on Application.

Foreign Natural & Mineral Waters.

Findlater & Co.,

London Bridge, S.E.

Importers of all kinds of

FOREIGN

Mineral Waters.

For Prices see overleaf.

BRUNNER, MOND & CO. LIMITED.

NORTHWICH, CHESHIRE.

Crescent 

Brand.

A PURE SUBSTITUTE

For Chalk, Whiting, Limestone, Marble, &c.

We strongly urge all Mineral Water Manufacturers not now using Bicarbonate of Soda, before committing themselves to Whiting for the coming Season, to try a 2 cwt. Bag of our Bicarbonate of Soda, which we shall be pleased to send off carriage forward on receipt of Postal Order for 8s.

MINERAL WATER BICARBONATE

SPECIALLY MADE FOR THE PRODUCTION OF CARBONIC ACID GAS FOR AERATED WATERS.

ADVANTAGES

NO Alteration of Plant necessary.

Great economy of Time and Labour is effected.

Great Cleanliness in Manufacturing is ensured.

The same Generator will yield THREE TIMES the amount of Carbonic Acid Gas per Charge.

The same quantity of Sulphuric Acid will yield TWICE THE AMOUNT of Carbonic Acid Gas.

There is NO SEDIMENT in the residual liquors, and consequently no Mud to deal with.

A Marketable Bye-Product (Glauber Salts) can, if desired, be obtained.

First-Class Waters are produced.

PLEASE TURN OVER

BRUNNER, MOND & CO. BM&Co. TRADE MARK. LIMITED, NORTHWICH.

Instructions for Using Bicarbonate of Soda in making Mineral Waters.

PRODUCTION OF CARBONIC ACID GAS.

PROPORTIONS TO BE USED:

1 cwt. Bicarbonate.
Minimum quantity of Water: 17 to 20 gallons.
3¾ gallons (say 68 lbs.) Sulphuric Acid of 167 Twaddle.
These quantities give about 58 lbs. Pure Carbonic Acid Gas.

THE METHOD OF CHARGING the Generator, and of running in the Acid, is exactly the same as when Whiting or Chalk, etc., are used; no agitation is required except at the very end of the charge. About 50% more bottles, or half as many again, will be charged than with the same weight of Whiting.

A Generator capable of holding 1 cwt. of Whiting, 36 gallons of Water and 6¼ gallons (1 cwt.) of Acid can be charged with 2 cwts. of Bicarb., 34 gallons of Water and 7½ gallons (1¼ cwt.) of Acid. This will yield ***three times as much Carbonic Acid Gas*** as is given by the Whiting process, and consequently three times as many bottles per charge—an immense advantage where space is limited and when business is brisk.

It will be seen from the proportions given above that only about *two-fifths* of the Acid and two-thirds of Bicarbonate (weight for weight, as compared with Whiting) are required to produce the same amount of Carbonic Acid Gas.

The proportion of Water can be varied according to circumstances. With the above proportions the liquor from the Generator (which liquor is always perfectly clear and free from sediment), will, if run into tubs or into crystallising pans, crystallise in about two hours at ordinary temperatures. The Crystals obtained are Glauber Salts, a readily saleable article, in place of the mud from Whiting, so disagreeable to handle, and so difficult to get rid of.

When the minimum quantity of water is used the liquor should not be allowed to stand in the Generator after work is finished, or the Glauber Salts will crystallise in it and cause delay by having to be dissolved out with water, or otherwise removed, before a fresh charge can be inserted. If it is not wished to recover the Glauber Salts, fill up the Generator with water after the charge is worked off, or work with more water in the original charge.

If the residual liquors are disposed of by pouring them down a drain, it is advisable first to dilute them with water, or to pour water down the drain either at the same time as, or immediately after, the liquors, in order to prevent a possible blockage of the drain-pipe by crystallisation.

Mineral Water Manufacturers who use the above process might, with advantage, send their Glauber Salts to the firms who supply them with their Acid.

BRUNNER, MOND & CO. LIMITED,
NORTHWICH, ENGLAND.



The

BRITONIAN

A PERFECTLY
SANITARY
HAIR
BRUSH

FREE FROM ALL DEFECTS COMMON TO THE ORDINARY MAKE

Send off the attached Post Card at once for full particulars.

S. D. PAGE & SONS, Ltd.
NORWICH
ENGLAND

STOCK
ONLY THOSE
HAIR
BRUSHES
THAT CAN BE
WASHED
FREQUENTLY

The ordinary Hair Brush cannot be washed without risk of coming to pieces, for two reasons:

1. It probably has a glued-on back which may come off when put in water.

2. It certainly has all its separate knots of bristles drawn in by one single wire or thread, neither of which are calculated to stand continuous contact with water, and in process of washing become rotten and break, leaving bristles unsecured and falling out.

Post Card

PLACE HALFPENNY STAMP HERE.

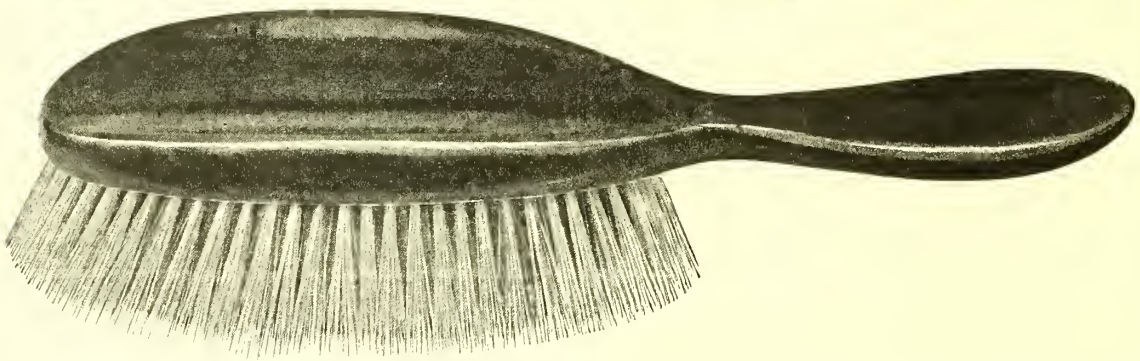
S. D. PAGE & SONS, Ltd.

Wholesale and Export Brush Manufacturers,

NORWICH,

ENGLAND.

The BRITONIAN
SOLID-BACK HAIR BRUSH



CAN BE WASHED AS FREQUENTLY AS DESIRED
WITHOUT INJURY

It is made on an altogether new principle in which a glued-on back or lacing in of bristles with wire or thread forms no part. Every back is one solid block. Every knot of bristle secured separately by our Patent Fastener.

It embodies all the latest improvements, eliminating all the defects fatal to the life of the old-type brush.

MADE IN MORE THAN 50 DIFFERENT PATTERNS

Sole Makers :

S. D. PAGE & SONS
LIMITED,

Makers of every description of Brushes for Home and Export

NORWICH, ENGLAND

London Showrooms :
5 Milk St. Buildings, Cheapside, E.C.

If interested in this or any description of brushes, fill in and send off at once the attached Post Card.

POST THIS

Dear Sirs :

Please forward free of charge illustrated Price List of the "Britonian" Solid-Back Hair Brush.

Name .....

Business .....

Address .....

Date ..... *1909.*

TWO POPULAR HOTELS IN CENTRAL LONDON.



THACKERAY HOTEL.



KINGSLEY HOTEL.

OPPOSITE THE BRITISH MUSEUM.

THACKERAY HOTEL

GREAT RUSSELL STREET, LONDON.

NEAR THE BRITISH MUSEUM.

KINGSLEY HOTEL

HART STREET, BLOOMSBURY SQUARE, LONDON.

PLEASE TURN OVER.

THACKERAY & KINGSLEY HOTELS.

THESE Temperance Hotels are situated close together in one of the healthiest districts of London. They are very near the BRITISH MUSEUM, the THACKERAY HOTEL being directly opposite, and the KINGSLEY within two minutes' walk of that famous place of interest.

The THACKERAY and the KINGSLEY HOTELS are modern in all their arrangements, convenient, substantial and well-appointed. The Public Rooms at both Hotels have recently been re-arranged, and the KINGSLEY HOTEL has been enlarged by the addition of new buildings in the rear, which include fifty quiet Bedrooms and a Second Dining Room.

They are furnished with careful regard to comfort, and the aim has been to supply the conveniences and advantages of the very large licensed hotels at moderate charges. Both the THACKERAY and KINGSLEY HOTELS are fitted with Lifts to all Floors, lighted throughout by electricity and have Bathrooms on every Floor.

Lounges and spacious Dining, Drawing, Writing, Reading, Billiard and Smoking Rooms.
Perfect Sanitation. Floors Fireproof throughout. Night Porters. Telephone.

The Cuisine and general arrangements of each of the Hotels receive the undivided attention of able Manageresses.

These Hotels are most favourably situated with regard to the Houses of Parliament, Law Courts, Art Galleries and Theatres. In fact, they are within easy walking distance or short cab drive of nearly all places of interest frequented by those visiting London. They are almost equi-distant from the great Railways, North, South, East and West; and the Museum and Holborn Stations on the Electric Railways being so close at hand, bring the Hotels to within seven minutes of the City, Royal Exchange, and Bank of England; while the Agricultural Hall, South Kensington, Earl's Court, Olympia, Shepherd's Bush, &c., can be reached within 15 to 30 minutes.

Intending visitors are requested to send an intimation, if possible, by post or telegram prior to arrival, that rooms may be reserved.

TELEGRAPHIC ADDRESSES: THACKERAY HOTEL: "THACKERAY LONDON." KINGSLEY HOTEL: "BOOKCRAFT LONDON."

BEDROOMS (including Attendance) - - - from 3 s. 6 d. to 6 s. 0 d.

Inclusive charge for Bedroom, Attendance, Table d'Hôte Breakfast and Dinner, from 8/6 to 10/6 per day.

FULL TARIFF AND TESTIMONIALS ON APPLICATION.

Extracts from Visitors' Book
AT THE
THACKERAY HOTEL.

—o—

J. O. R. Macdonald, Esq., W.S., *Dumfries.*—"I very gladly do a thing I never did before—record in a book of this kind my *entire* satisfaction with the comforts of this Hotel."

The Rev. Canon J. Clare Hudson, *Horncastle.*—"Am much pleased with the management of this Hotel. It is very comfortable. The library is an interesting feature."

Dr. Barnes, *Bank House, Bolton.*—"Delighted with the arrangements. Perfect comfort and quietude."

John Ingram, Esq., *Glasgow.*—"I commend to all seekers after comfort, cleanliness, courtesy and home qualities, this house—The Thackeray."

Extracts from Visitors' Book
AT THE
KINGSLEY HOTEL.

—o—

W. B. Mason, Esq., *Leeds.*—"The Kingsley is a model Hotel—a pattern for Hotels of the 20th Century to copy."

Rev. R. Marshall Harrison, D.D., *New York City.*—"Unique for permanent homelikeness among all the Hotels I have known in the Old World and the New."

W. J. Fitz-Patrick, Esq., and Family, *Liverpool.*—"The most comfortable Hotel we have ever stayed at. Admirably arranged."

Rev. David Beatt, D.D., *Aberdeen.*—"Well furnished, artistic and clean Hotel. Quick service and kind and courteous civility all round."

THE

Mawson Filters

Are the BEST

Practical Filters for Chemists' Sale

Household and Table Filters.

Prices and Terms on application.

Main Supply Filters.

Filters for Tourists and Motorists.



Proprietors:

The Mawson Filter Co.

Telegrams "Weddell," Newcastle-on-Tyne.

Newcastle-on-Tyne.

"MAJAX"

For Sweetening and Strengthening Infants' Food

Added to Cows' Milk according to directions,
forms an exact equivalent of Mothers' Milk.

Has been known to and used by the Medical Profession and Aristocracy for over thirty years as *Mawson's Compound Sugar of Milk*

A Majax Baby

Weighed only
5 pounds
when 1 month old



A Majax Baby

12 months old
Weighs 20 lbs.
and has 11 Teeth

Now being extensively advertised

Sold in Packets at 1/6 & 3/-, and in Tins at 5/6

TO BE PROCURED FROM ALL PATENT HOUSES

SOLE MANUFACTURERS

MAWSON, SWAN, & WEDDELL

NEWCASTLE-ON-TYNE



Seals our Speciality — Franz Schneider & Co. Alpine Works ÷ 51-53 Stamford Hill, London, N. — Embossers to the Trade.

CHEMISTS' LABELS A SPECIALITY

Improve your labels and you will increase your trade.

CHEMISTS' LABELS
made as a
SPECIALITY.



CHEMISTS' LABELS
made as a
SPECIALITY.

In using common labels you are saving pence whilst missing pounds.

ZEAL'S Patent CLINICAL THERMOMETER

The "REPELLO"

Requires no Shaking Down. A 30-Second pushed back in an instant.

GUARANTEED ACCURATE.



SPECIAL AWARD AND GOLD MEDAL, NEW ZEALAND, 1907.



ZEAL'S PATENT SAFETY CLIP
CLINICAL THERMOMETER CASE.

The ordinary case as made is liable at all times to fall out of the pocket, with the usual result that the Clinical Thermometer gets broken.

To prevent this breakage a Clip has been attached to the case which slips on to the waistcoat pocket, thus securely fastening the case.

HIGHLY SPOKEN OF BY THE MEDICAL PROFESSION.

IMPROVED CLINICAL THERMOMETERS

BROAD INDEX. EASY TO READ.



The difficulty of reading the ordinary non-magnifying Clinical Thermometer, owing to the Mercury Index being so small, causes a great deal of trouble to the ordinary user. In consequence, G. H. Zeal has placed upon the market this improved kind, which gives a clear definite index, **extra broad,** also having flat sides is less likely to roll and get broken.

ZEAL'S IMPROVED
"EASY SET" CLINICAL THERMOMETERS
LONDON MADE.

Reset with One or Two Shakes.



30 Second Registering.

Highly Spoken of by Doctors and Nurses. THE LATEST AND BEST IN QUICK-SETTING CLINICALS.

A Good Selling Line. Extra cost "small". Made in all lengths.

KEW CERTIFICATED CLINICAL THERMOMETERS A SPECIALITY.

All Thermometers are made from "Normal Glass," which prevents the bulb contracting, making them perfectly accurate for all time.

Send for New Illustrated List of Novelties to—

INVENTOR AND PATENTEE,

G. H. ZEAL, 82 Turnmill St., LONDON, E.C.

Wholesale Manufacturer of CLINICAL THERMOMETERS. A Selection of 50 Kinds.

Telegrams: "ZEALDOM LONDON." Telephone, *12438* CENTRAL.

ALL MY CLINICAL THERMOMETERS ARE MADE AND TESTED UPON THE PREMISES AND GUARANTEED ACCURATE.

SCHOOL OF PHARMACY

OF THE

PHARMACEUTICAL SOCIETY.

The School provides systematic courses of instruction for the Minor and Major Examinations of the Pharmaceutical Society. Both Courses commence on September 30, 1909, the Minor Course continuing until the end of June, and the Major until the end of March, 1910.

Arrangements have been made to admit to Special Shorter Courses Students who can satisfy the Dean that they have already received adequate scientific training.

Applications for admission to the School, or for any information respecting it, should be addressed to—

THE DEAN OF THE SCHOOL (Prof. Greenish), 17 Bloomsbury Square, W.C.

LONDON COLLEGE

of CHEMISTRY, PHARMACY, and BOTANY.

Principals: { HENRY WOOTTON, B.Sc. (Lond.)
ARTHUR KIRKLAND, Ph.C.

Systematic Courses of Lectures, Classes, and Practical Work in Preparation for the Pharmaceutical Examinations.

TUTORIAL REVISION COURSE for advanced Students, AUGUST 18th.
MINOR—The NEXT COMPLETE COURSE of Lectures, Classes, and Practical Work for MINOR Students begins on SEPTEMBER 6th.
MAJOR COURSE, OCTOBER 6th.
APOTHECARIES' HALL COURSE, August 18th.
Entries for these Courses may now be received.
Preparations for the Pharmaceutical and Medical Preliminaries.

For Prospectus, &c., apply to—

The SECRETARY, London College of Chemistry & Pharmacy,
323 CLAPHAM ROAD, LONDON, S.W.

NORTH OF ENGLAND SCHOOL OF CHEMISTRY & PHARMACY,

55 Northumberland Street, Newcastle-on-Tyne

Principal: J. STABLEFORD HILL, Ph.C.

Thorough Preparation for MINOR, MAJOR, & APOTHECARIES' HALL Examinations.

FEES MODERATE AND INCLUSIVE.

THE SCHOOL FOR SUCCESS!

South of England College of Pharmacy,

186 CLAPHAM ROAD, LONDON, S.W.

Principal—H. LUCAS, Ph.C., F.C.S.

Assistant Master—T. W. ATTENBOROUGH, Ph.C. Demonstrator—J. S. WHITE, M.P.S.

FACILITIES UNEXCELLED!
TEACHING THOROUGH!!
RESULTS EXCELLENT!!!

EXAMINATION RESULTS: — During the last **eighteen months** (January 1908 to July 1909), **75** students were successful from this College. (**Minors** 70, **Major** 1, **Apothecaries' Hall** 4), the **majority** at their **first attempt.**

TUTORIAL COURSE starts Aug. 12 for October Examination. Fee **5½** guineas (Minor).

WINTER TERM commences October 1 for January Examination. Fee **£9 9s.** (Minor).

EVENING CLASSES commence October 4. Fees from 1 guinea per term.

MAJOR CLASS starts January 1, 1910 for April Examination.

For Prospectus and further particulars apply The Secretary.

NORTHERN COLLEGE OF PHARMACY

100 & 102 BURLINGTON STREET, MANCHESTER.

PRINCIPALS:
GEO. CLAYTON, F.C.S., Ph.C.; F. LAWSON, B.Sc., Ph.C.

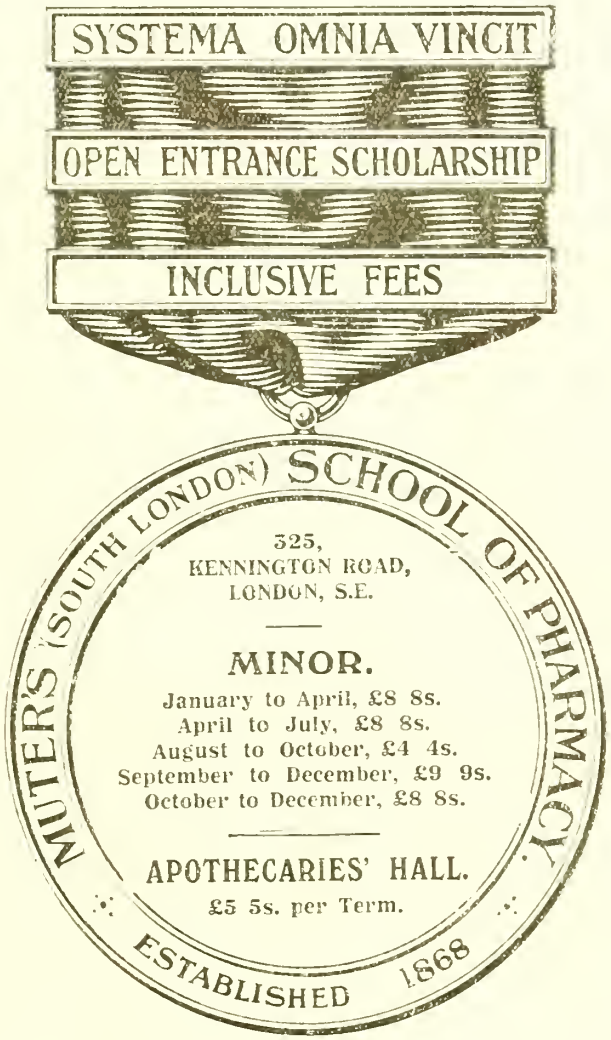
At the July Examinations the following gentlemen passed the **Minor.**

Mr. E. S. Bury	Manchester
,, R. P. Cundall	Sherburn
,, W. Charlton	Manchester
,, J. E. A. Dixon	Burnley
,, J. L. Holden	Lancaster
,, W. Hudson	Lincoln
,, R. Mercer	Haydock
,, R. W. Parker	Preston
,, J. W. Thompson	Farnworth
,, T. S. Wright	Hall Bridge
,, H. Booth (Manchester Scholarship)	

The preparation is **sound** and **thorough,** covering every detail of the Examination requirements.

The	**NEXT COURSE** commences on	**SEPT. 1st.**
,,	**Revision Course** for Oct. Exam. on	Aug. 24th.
,,	**Evening** ,, resumes	,, Sept. 7th.
,,	**Tuesday** ,, ,,	,, Sept. 7th.
,,	**Wednesday** ,, ,,	,, Sept. 8th.

Prospectus with full particulars posted to any address. Early application for benches should be made.


SYSTEMA OMNIA VINCIT
OPEN ENTRANCE SCHOLARSHIP
INCLUSIVE FEES
MUTER'S (SOUTH LONDON) SCHOOL OF PHARMACY
325,
KENNINGTON ROAD,
LONDON, S.E.
MINOR.
January to April, £8 8s.
April to July, £8 8s.
August to October, £4 4s.
September to December, £9 9s.
October to December, £8 8s.
APOTHECARIES' HALL.
£5 5s. per Term.
ESTABLISHED 1868

Clarendon Road, LEEDS.



EARLY APPLICATION FOR BENCHES MUST BE MADE.

Principal—F. PILKINGTON SARGEANT.

This College stands in its own grounds in one of the healthiest districts of Leeds. The Laboratories and Dispensaries are lofty and well lighted. Every facility is offered to Students.
Special Classes for Ladies. Optical Correspondence Class.

NOTE.—Good Apartments may be obtained near the College at very reasonable charges.

Students may enter on Tuesday, August 17, for the October or January Examination.

NEXT TERM COMMENCES OCTOBER 12, 1909.

Prospectus and all particulars on application.

UNIVERSITY OF BIRMINGHAM

Faculties—
SCIENCE, ARTS, MEDICINE, COMMERCE,
SPECIAL SCHOOLS OF LANGUAGES.
DEPARTMENT FOR TRAINING OF TEACHERS.
Schools of
ENGINEERING, METALLURGY, MINING, BREWING, DENTISTRY,
Leading to Degrees and Diplomas.

The Session 1909-10 commences October 4th, 1909.
All Courses and Degrees are open to both Men and Women Students.
In the Medical School Courses of Instruction are arranged to meet the requirements of other Universities and of Licensing Bodies.
Graduates, or persons who have passed Degree Examinations of other Universities, may, after one year's study or research, take a Master's Degree.

Syllabuses, with full information as to Lecture and Laboratory Courses, Regulations for Degrees, Diplomas, &c., Exhibitions and Scholarships, will be sent on application to the Secretary of the University.

BIRMINGHAM & MIDLAND

COLLEGE OF CHEMISTRY, PHARMACY AND BOTANY.

45 Newhall Street, Birmingham.

Principal: **G. L. SCOTT,** Pharmaceutical Chemist.

Term began on July 15th.

Full particulars on application.

GLASGOW SCHOOL of PHARMACY,

BLYTHSWOOD CHAMBERS,
180 WEST REGENT STREET, GLASGOW.

Principal: JOHN LOTHIAN,
Pharmaceutical Chemist, Medallist of the Pharmaceutical Society, &c.

The special features of this institution are the splendid equipment, systematic and thorough scheme of instruction with individual attention.

AUTUMN COURSE BEGINS AUGUST 16.
Fee 4 guineas.

Illustrated Prospectus, Pass Lists and Testimonials on application.

THE
BATH & WEST OF ENGLAND
COLLEGE of Chemistry & Pharmacy
DAVID J. WILLIAMS, F.C.S., Ph.C., Silver Medallist, Principal.

ECONOMY. EFFICIENCY. INDIVIDUAL ATTENTION.

RESULTS—AVERAGE BETWEEN 70 & 80 per cent.

TUTORIAL COURSE ... ... **Aug 23. Fee 4 guineas.**
LONG TERM ... ... **Sept. 1. ,, 9 guineas.**
Entries are now being made for the Special Long Winter Course, and Benches should be secured as soon as possible.
APOTHECARIES' EXAM. ... ... **5 guineas per term.**

PREPARATORY POSTAL TUITION A SPECIALITY.
FEES: 1 Guinea, 3 Guineas, and 5 Guineas
Ten per cent. reduction in College fees to Correspondence Students on entrance.

For Terms and Prospectus apply The SECRETARY,
Bath & West of England College of Chemistry & Pharmacy, 6 Cleveland Place East, BATH. (Tel. No. 327).

THE

EDINBURGH CENTRAL SCHOOL OF PHARMACY

26 CLYDE STREET, EDINBURGH.

Principal—WM. BEAVERLY COWIE, Ph.C., F.C.S. (Heriot Matt. Medallist in Chemistry, &c.
Assisted by B. M. BRANDER and T. O. BROADBENT.

During the past year (July to July inclusive) the undermentioned candidates passed from this school:

MAJOR: Geo. Pirrie, Rothiemay (*at First Attempt*)

MINORS:

Mr. A. F. Attwell, Bath
„ R. H. Bennison, Middlesbro'
„ W. Borthwick, Peebles
„ J. Bowie, Edinburgh
„ P. M. Brooks, Whitby
„ F. T. Brown, London
„ P. K. Brown, Leith
„ A. Brunton, Dumfries
„ A. Coveney, Straits Settlements
„ F. B. Crookart, Perth
„ G. Cruden, Fraserburgh
Mr. W. J. Davies, Swansea
„ E. W. Fair, East Linton (Fairchild scholar)
„ R. B. Forgan, Edinburgh
„ A. Geddes, Bridge of Allen
„ J. M. Goodswen, Redcar
„ W. Green, Alnwick
„ F. T. Hamilton, Carlisle
„ A. E. Harwood, Edinburgh
„ W. A. Hudson, Leeds
„ A. T. Hope, Kelso
Miss A. Lindsay, Haddington
Mr. D. McClure, Crieff
„ J. Milne, Midmar
„ J. Moir, Helensburgh
„ A. D. Morrison, Leith
„ G. H. Sim, N. Berwick
„ W. M. Soutar, York
„ T. G. Stewart, Coldstream
„ E. Watson, Sunderland
„ J. G. Yager, Durham

The Laboratories and Lecture Rooms are acknowledged to be the Best Equipped in Britain.

The Lectures and Practical Work are commenced from the foundation in each subject, and each student receives individual attention.

The Short Course for October Examination Commences on 17th August. (For Seniors only.)

The Winter Session (Day and Evening) commences on 5th October, when Junior and Senior Classes will be commenced as heretofore.

For New Prospectus, etc., apply to

WM. BEAVERLY COWIE, 26 Clyde Street, Edinburgh.

"Oni Heuir ni Fedir."

THE LIVERPOOL SCHOOL OF PHARMACY

18 Colquitt Street, Liverpool.

Principal - - H. HUMPHREYS JONES, F.C.S., Ph.C.,
(Analytical and Consulting Chemist)

Unexcelled Facilities. Individual Attention. Excellent Results.

A short Revision Course for the October Examination Will commence AUGUST 16th.
The next Full Time Course will commence SEPTEMBER 13th.

This Institution is officially recommended by the Liverpool Chemists' Association, who yearly appoint a committee of education to superintend the course of study, and the Materia Medica Museum belonging to the Association, deposited at the Royal Institution (next door) is also open to students of this school.

Through the permission of the curator of the Liverpool Botanic Garden lessons in botany are given during the summer months in the gardens and a full supply of flowers is obtained all the year round. Students of the Liverpool School of Pharmacy are thus exceptionally favoured.

The Prospectus, which contains a quantity of useful information, post free on application. Entries are now being made for the Revision and Winter Courses.

THE WESTMINSTER COLLEGE.

Founded in 1874 by G. S. V. WILLS, Ph.C., &c. Next opening, August 17.

Full particulars will be found in the Illustrated Prospectus. Post free.

WILLS'S UNIVERSAL POSTAL SYSTEM. Fee £1 1s.

Assistants and Apprentices who are unable to attend a School of Pharmacy may be prepared for the various Examinations by means of the above System of Instruction.

APPLY TO MR. G. S. V. WILLS, 402 CLAPHAM ROAD, LONDON, S.W.

North Stafford School of Chemistry and Pharmacy.

(Established 1903.)

Principal: EDWIN GRIFFITHS, Ph.C., The Pharmaceutical Society's Silver Medallist, 1900, KIDSGROVE, STOKE-ON-TRENT.

A small but thoroughly equipped institution wherein my personal interest is taken in the success of every student. Special facilities and exceptional opportunities in the practice of Chemistry, Pharmacy, and Botany.

RECORDS:—1904, October; 1905, October; 1906, October; 1908, April; 1909, July: 100% pass, London Minor.

Next Term commences September 6. Three Benches vacant. Particulars from the Principal.

"The Prescriber."

A Monthly Journal dealing with the Newer Remedies.

Edited by THOS. STEPHENSON, Ph.C., F.C.S.

INVALUABLE TO THE PROGRESSIVE PHARMACIST.

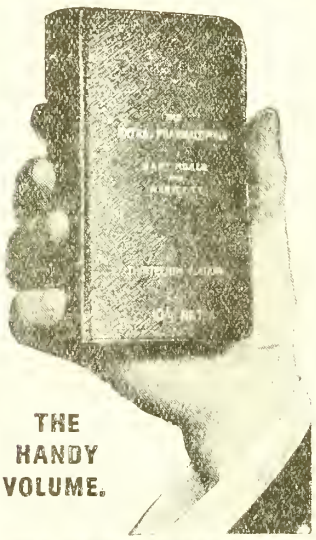
Subscription Five Shillings per annum, including postage.
Specimen copy 6*d*.

"THE PRESCRIBER" Office, 137a George Street, EDINBURGH.

Post Free, 10/9 **MARTINDALE & WESTCOTT'S** Post Free, 10/9

EXTRA PHARMACOPŒIA.

THIRTEENTH EDITION. 10s. 6d. net.



THE HANDY VOLUME.

Size $5\frac{5}{8} \times 3\frac{1}{2} \times 1$ in.

The following is a brief outline of the changes effected:—

128 pages of new matter added. Thinner though durable paper. A quarter of an inch less bulky than the 1906 issue. **More than a quarter** of the book new. **Experimental Data** as to working formulæ, solubilities, &c. **New materia medica et Pharmaceutica.**

Pharmaceutical Standardisation fully dealt with.

Molecular Weights revised to 1908 Standards.

Vaccine-therapy described in detail. **Tuberculin Preparations** (numerous), including the new **Ophthalmo-** and **Cuti-reaction,** and **Opsonic Index,** fully dealt with; a large number of **new Vaccines** are included. The **Lactic-Acid-Bacilli** method of treatment of intestinal fermentation constitutes a further addition. **Analytical Section** brought up to date.

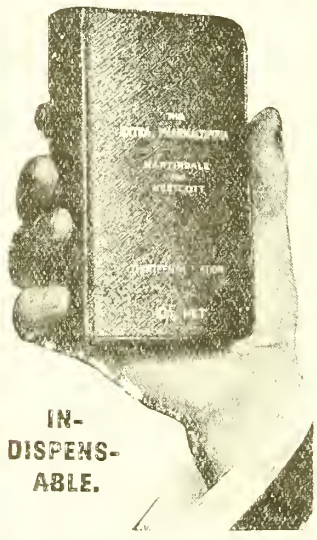
Therapeutic Index is extended. **Antidotes to Poisons** dealt with more fully. **Glossaries of Phrases** occurring in foreign prescriptions and a condensed chapter alphabetically arranged of **Patent Medicines** are added, as also a new section embodying experimental work on the **Antiseptic Power of Chemicals and Disinfectant Preparations** for Surgeons' use. **Registered Trade Marks** specially indicated.

General Posological Index reset in two columns, and more than 1,600 headings for reference added.

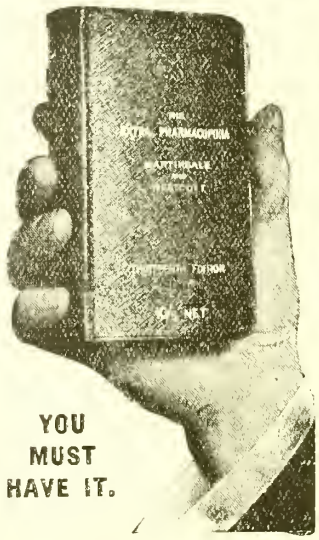


HAVE YOU GOT ONE?

Weight $10\frac{1}{2}$ ozs.



IN-DISPENS-ABLE.



YOU MUST HAVE IT.

What the Press says:

THE CHEMIST & DRUGGIST.—"Encyclopædic in range of information, and an encyclopædia in its orderly presentation of facts which are wanted at a glance."

THE BRITISH AND COLONIAL DRUGGIST.—"We can thoroughly commend this present issue as a worthy successor to its classical forerunners, and one which should find an appropriate niche in the equipment of every progressive physician and pharmacist. **Fills the place which no other publication can fit.**"

BRITISH MEDICAL JOURNAL.—"Succinct and reliable information can be obtained in a very small compass regarding the drugs and methods of treatment at present in vogue."

MEDICAL PRESS.—No medical book of the kind, which is a mere universal companion to the consulting-room table . . . a necessity to all busy practitioners."

PRACTICAL DRUGGIST.—"The book, a volume $5\frac{1}{2} \times 3\frac{1}{2}$ inches, contains an amount of information that is surprisingly great, which is not by any means restricted to purely pharmacological data, but **contains therapeutic knowledge in the widest sense of the word.**"

THE EXTRA PHARMACOPŒIA, 13th EDITION.

Special Terms to Chemists for two or more Copies.

LONDON: H. K. LEWIS, 136 GOWER STREET, LONDON.

Supplied also by W. MARTINDALE, Manufacturing Chemist, 10 New Cavendish St., W., at same rate.

The National Cash Register Company, Ltd.

225 Tottenham Court Road, London, W.

Great Reduction in Prices.

Cash Registers from £4 upwards.

Autographics, £1 to £6.

Buy direct from us. We Pay no Commissions to Agents.



Use a National Cash Register in your shop!
It will save you money, mistakes it will stop,
Protecting your Customers, trade will increase,
Your time will be saved, and your worry decrease.

We accept monthly instalments if required. Established 20 years.

Our Machines Guaranteed to be Cheaper and Better than any other make.

New Machines at lower prices than those charged by other dealers for similar machines second-hand

Write for particulars, or call at any of our Show Rooms and inspect our stock, where we have Cash Registers suitable for every class of shop, from the smallest to the largest.

New Price List now ready. Post Free per return.

Imperial International Exhibition, Shepherd's Bush: we are exhibiting at our Pavilion opposite the Flip-Flap, where we shall be pleased to demonstrate any of our Registers to anyone who favours us with a visit.

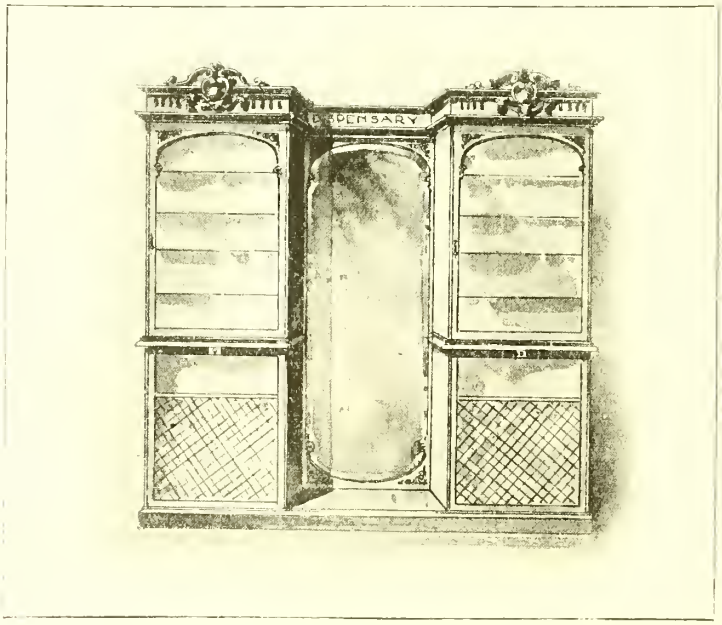
BRANCH OFFICES IN EVERY TOWN.

Parnall & Sons, Ltd.

INVITE INQUIRIES FOR

DISPENSING SCREENS, **COUNTER CASES,**
COUNTERS, **SIGNS,**
WALL FITTINGS, **STALL PLATES & FASCIAS,**
HAND CARTS, **CASH DESKS,**

WEIGHING APPARATUS, specially designed to meet the requirements of the new Weights and Measures Regulations.



FULL CATALOGUES AND PRICES ON APPLICATION TO

Narrow Wine Street, BRISTOL

LONDON:
10 Rood Lane, E.C.

SWANSEA:
12 Alexandra Road.

PARNALL & SONS, Ltd.

SPECIALISTS in SHOP FRONTS and FITTINGS for CHEMISTS and DRUGGISTS.



SHOP FRONT IN MAHOGANY DESIGNED AND ERECTED BY US AT CHELSEA.

CATALOGUES FREE. INQUIRIES INVITED.

NARROW WINE STREET, BRISTOL

LONDON: 10 Rood Lane, E.C.

SWANSEA: Alexandra Road.



THE PLASTIC MODEL

SPECIALISTS.

All kinds of Artistic Models supplied suitable for window or counter displays.

Specimen, as illustrated, supplied on separate bases, price 7/6 each, or back to back on one base with revolving pivot, price 12/6. Chemist's own name printed in space provided free of charge. Modelled in relief 2/- extra. Terms: Cash with order. Quotations given to firms requiring a quantity from special model.

Enquiries solicited by the

PLASTIC ADVERTISEMENT CO.

Radcliffe Studios, EMBSAY, YORKSHIRE.

Nat. Tel: 152 Skipton. Telegrams: "Plastic Embsay."



ARE YOU SATISFIED WITH YOUR SIGHT-TESTING DEPARTMENT?

IF NOT, WRITE TO THE

BRITISH OPTICAL INSTITUTE,

Mount Edgcumbe Gardens, Clapham Road, S.W.

We can help you to develop your business. The whole science of sight-testing and general optics taught by Instructors of many years' successful experience in the profession.

On the staff is a fully-qualified Ophthalmic Surgeon, who has for some years devoted his whole time to the training of Oculists and Opticians.

Students coached for all Optical Examinations.

Correspondence courses and attendance classes.

The Institute is fully equipped with all appliances and apparatus for practical demonstrations.

Private Instruction can be arranged.

For full Prospectus write to Principal, F. GORDON HUNTLEY.

TINFOILS

PURE TIN FOILS (free from Lead) and COMPO FOILS for ALL PURPOSES.

***Speciality:*—TINFOIL, EXTRA THIN in CONTINUOUS REELS for Wrapping Machines.**

STAMPED TINFOIL FOR SHAVING STICKS.

TRANSPARENT. GREASEPROOF

for lining BOXES OF TOILET SOAP, LOZENGES, PILLS, and PATENT MEDICINES, DRUGS, etc. Also for SOAP WRAPPERS, FANCY BOX ---- and PACKET COVERING ----

PARCHMENT PAPER.

(*Non-dissolvable*) For Tying over, Capping and Packing.

BAUDRUCHE and CAPPING SKINS.

MANUFACTURERS:

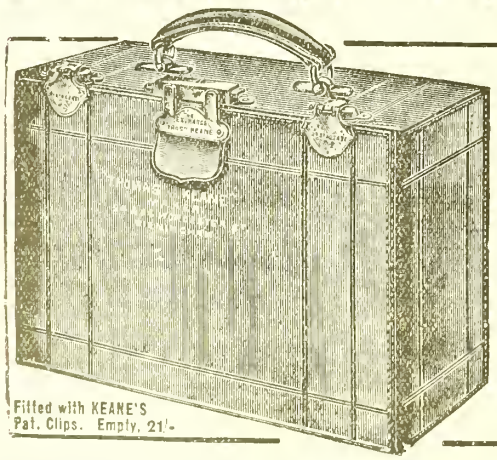
H. ERHARDT & Co. Ltd. —9 and 10 Bond Court,— **WALBROOK, LONDON, E.C.**

Lilywhite Photo Papers and Postcards.

All amateurs have heard of this brand and you may calculate splendid trade in this line with good discounts. Apply for terms of Agency for your district.

LILYWHITE WORKS, HALIFAX.

Tels.: 1041 & 1041a.



ARE YOUR TRAVELLERS MODERNLY EQUIPPED?

THOMAS KEANE, *ENGLISH COWHIDE SAMPLE CASE MAKER,*

64 & 66 Worcester St., BIRMINGHAM.

Manufacturer of the

CHEMISTS' EXCHANGE CASE.

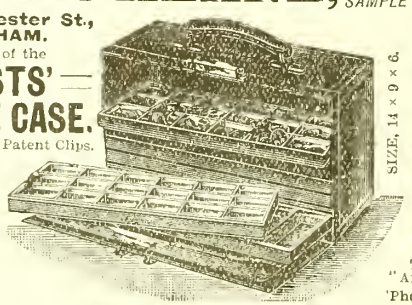
Fitted with Keane's Patent Clips.

Complete with 8 Trays (with 7 or 18 Divisions to each Tray), **27/6.**

FACTORY:

Exchange Works, Old Meeting Street, Birmingham.

Write for Illustrated Price List.





Telegrams: "ANEKE B'HAM." 'Phone: MID. 1260.

Darter Wilkinson & Co.

MANUFACTURERS OF

Pleated Paper Bottle Caps.



NO. 4. MACHINE-MADE

Dish & Dessert Papers. &c.

Nos. 0, 1, 2, 3, 10, 20, 30, 3B. for Phials @ 5d. per gross
,, 4, 4B, 40 (3 to 6 oz.) ... ... ,, 7d. ,,
,, 5, 5B, 50, 5½ (8 to 10 oz.) ... ... ,, 8d. ,,
,, 6, 6B, 60 (Pints) ... ... ,, 10d. ,,

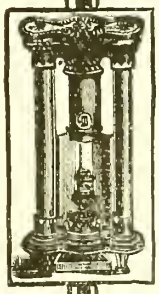
23 to 25 Sandland Street, London, W.C.

PURE HEAT

WITHOUT SMOKE OR SMELL.

CLARK'S PATENT HYGIENIC

"SYPHON" STOVES



Agents wanted. Liberal Discount allowed.

The heat generated by the "SYPHON" STOVE is ABSOLUTELY PURE. NO FUMES OR SMELL can pass into the Apartment. All products of combustion are rendered innocuous by automatic action within the Stove, PURE HEATED AIR ONLY BEING EMITTED.

NO FLUE REQUIRED.

S. CLARK & CO., Patentees and Makers, Compton Works, Canonbury Road, Highbury, London, N.
Showrooms: 58 Holborn Viaduct, E.C.
Telegrams: "Syphon Stoves London."
Telephone: 1777 North.

WRITE FOR NEW SEASON'S CATALOGUE No. 58, FREE.

PERKEN, SON & CO. Ltd.

(ESTABLISHED 1852)

Manufacturers of

Clinicals and Thermometers

for all purposes.

WRITE FOR PRICE LISTS

Special Quotations
to
Wholesale Buyers

Being actual makers, we are in a position to give the best quality at the lowest possible prices.

PERKEN, SON & CO. Ltd.,
99 Hatton Garden,
London.



To Chemists & others Interested in Dentistry

We have had

25 YEARS' EXPERIENCE

in progressive Dentistry.

We can supply everything the tyro in

DENTISTRY REQUIRES

from a tooth to a complete Surgery or Workshop Outfit.
And our

EXPERT OPINION

is always at your service on any subject connected with Dentistry. If you are thinking of adding Dental work to your present business

IT WILL PAY YOU

to write for our catalogues.
No matter where you are situated, we can do business with you, and do it to your satisfaction, intelligently and with careful attention to detail. Drop us a postcard mentioning the *C. & D.*

GEORGE CHALK & CO., DENTAL MANUFACTURERS, IMPORTERS, AND RETAILERS, **73 GT. PORTLAND STREET, LONDON, W.**

Telegrams: "DENTISTRY LONDON." Telephone: 1470 MAYFAIR.

AYRTON-GRAHAM, Ltd.

SHOP FITTERS,
SHOW CASE MAKERS,

DESIGNERS of Shop Fronts,
Exhibition Cases,
and Special Fitments.

Window Fittings and Shop Fittings

OF ALL KINDS.

DEPARTMENTS:

Cash Tills	Window Blinds
Drawer Knobs and Labels	Safes
Facia Signs	Show Cases
Glass Tablets	Show Stands
Glass Shelves	Glass Shelf Clips
Mirrors	&c., &c., &c.

THE "FACILE" WINDOW SHELF BRACKET,
without screws,

is the "simplest and best"; users say so.
Can be fixed or unfixed instantly.

An inspection of Show Rooms invited.

106 Duke Street, Liverpool.

H. MILLS,

Chemists' Shop Fitter, Shop-Front Builder,
and Show-Case Manufacturer.

163 & 165 Old St., LONDON, E.C.



SHOP FITTED BY H. MILLS.

ESTIMATES FREE.

PLANS FOR ALTERATIONS SUBMITTED.
UP-TO-DATE ARTISTIC DESIGNS.

Shop Fronts, Glass Facias, Stall Boards, Glass Shelves, Window Fittings, Exhibition Cases to Order, Recess Bottles, Jars, Electric Installations. A quantity of First-class Fittings always in Stock.

HIGHEST RECOMMENDATIONS.



CHEMISTS' SHOP FITTERS.

BOWLING
& SON,
SHOP FITTERS

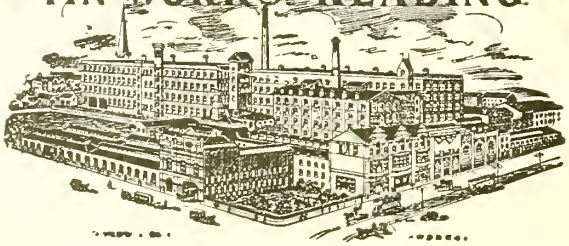
Gun St., Brushfield, St.
BISHOPSGATE, LONDON.

Best work only at popular prices. See the shops fitted in our modern style with the American Soda Fountains and Drinking Counters. Windows altered for the display of goods—a speciality. Send for Estimates, free. Our Modern Windows will pay for themselves in three months. Write to us, and we will do the rest.

HUNTLEY, BOORNE & STEVENS, LTD

TIN-WORKS, READING.

COLOR PRINTERS ON TIN.



MAKERS OF HIGH-CLASS
DECORATED & PLAIN TIN BOXES
& SPECIALITIES FOR CHEMISTS.

Quotations to samples
or descriptions.

CORRESPONDENCE INVITED.

Telegrams
Tinworks Reading. National Telephone 29.



T. O'BRIEN,
Pioneer of the CHECK TILL World.

O'BRIEN PATENT Self-closing Check Tills.

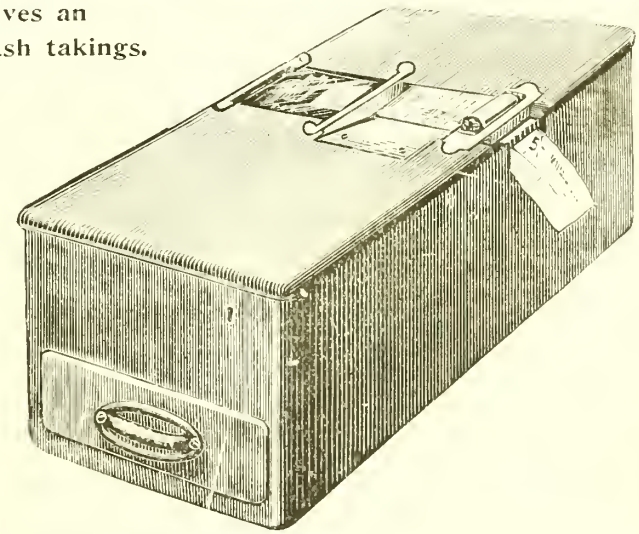
SAFEST, QUICKEST, BEST & CHEAPEST.

Prices from 2½ Guineas.

O'BRIEN PATENT SELF-CLOSING

RECEIPT PRINTING CHECK TILL.

Increases cash takings and gives an absolutely perfect check in cash takings.



SPECIAL FEATURES.

The only Self-closing Voucher Till.

Absolutely Automatic.

Has self-reversing Ink Ribbon.

Date can be altered, new ticket roll put in, and roller re-inked without unlocking the lid.

Receipt to correspond with record only can be issued.

Specimen unsolicited Testimonials from Chemists:—

Dear Sir—Enclosed I beg to hand you cheque in payment of our account herewith for Check Till received. I have given it a very fair trial and find it in every way satisfactory. On Saturday last it registered 337 transactions without a hitch, and I have noticed my receipts were on an average twenty per cent. better than before I had the till. This of course may be a coincidence, but it is very strange that such a coincidence should happen from the very moment the cash system is altered.
Yours truly, (Signed) W. H. G., L.P.S.I.

Dear Sir,—**The two Voucher Tills** I had from you have given me every satisfaction. I may also state I consider them **the best advertising investment I have yet struck.**

T. O'Brien,—Dear Sir,—I am enclosing herewith the second instalment on Coin Exhibitor Voucher Check Till. The Till works splendidly and was a very great help to me during **the rush of Christmas week,** which I am pleased to say **constituted a record,** quite contrary to expectation (perhaps you will say **this was due to the advertising methods of the Till**).

Gents,—I have pleasure in sending you cheque for another instalment. The Till is working splendidly and the coupons are coming in daily.

Thos. O'Brien,—Special Order,—1 Self-closing Check Till and 1 doz. rolls of paper. **Have been using your Tills for nearly 20 years, and they give every satisfaction.**

Price Lists with full particulars from

THOS. O'BRIEN, 30 Slater Street, LIVERPOOL.

London Office: 281 & 282 HIGH HOLBORN, W.C.

JOHNSON, MATTHEY & Co.

LIMITED,

REFINERS OF GOLD, SILVER, & PLATINUM.

MANUFACTURERS OF

PLATINUM APPARATUS

For Chemical Works,

Platinum Sheet, Wire and Foil for Electrical Purposes.

(Highest Prices Paid for Old Platinum Apparatus, Scrap, &c.)

Assayers and Melters to the Royal Mint and Bank of England.

MANUFACTURERS OF

Nitrate Silver, Chloride Gold, Caustics, Chemical Re-agents, Laboratory, Mining, and Assaying Apparatus.

Assayers of Minerals and Metals and Metallurgical Chemists,

Jewellers' and Dentists' Sweepings Purchased.

MAKERS OF THE

Barium Platino Cyanide Screens for X-Ray Work.

74 to 81 HATTON GARDEN, LONDON

THREE INDISPENSABLE REFERENCE BOOKS.

The World's Commercial Products.

A descriptive account of the Economic Plants of the World and of their Commercial Uses. By W. G. Freeman, B.Sc., F.L.S., and S. E. Chandler, D.Sc., F.L.S. With contributions by numerous Specialists. In demy 4to, cloth gilt, with 12 coloured plates, and over 420 other illustrations, 400 pp., net 10*s.* 6*d.*

The Dictionary of the World's Commercial Products.

Second Edition, Revised. With French, German, and Spanish equivalents for the Names of the Products. By J. A. Slater, B.A., LL.B. In demy 8vo, 163 pp., cloth, 2*s.* 6*d.*

The World and its Commerce.

Contains simply written chapters on the general geography of the world, the seven great industries, the commercial geography of the British Empire at home and abroad, and of foreign countries. In crown 8vo, quarter cloth, 128 pp., with 34 additional maps, 1*s.*

Complete Catalogue post free from

LONDON: SIR ISAAC PITMAN & SONS, LTD.

WHOLESALERS & MANUFACTURERS

DO YOU WANT TO INTRODUCE SPECIALTIES?

If so, you need me in your business. I am a journalist with ad.-writing experience. I SUGGEST PRACTICAL AND ORIGINAL AD. SCHEMES. I write convincing, strong copy that sells goods. Some of the most successful firms employ me. Their names on application. Send for my free booklet. Interviews by appointment, free.

F. A. DEGEN, Chemists' & Druggists' Ad. Expert,

c/o "C. & D.," 42 CANNON ST., LONDON, E.C.

FINE CHEMICALS for Scientific purposes and for College and Technical Institute Laboratories.

PHARMACEUTICAL CHEMICALS of Standard Quality for Manufacturing and Dispensing.

PHOTOGRAPHIC CHEMICALS in bulk or ready Packed for Retailing.

RADIUM and RADIO-ACTIVE MINERALS.

MINERAL and GEOLOGICAL SPECIMENS and SETS.

TECHNICAL CHEMICALS for Glass, China, Enamel, Varnish, and other manufacturing purposes.

Contractors to H.M. Government.

HARRINGTON Bros. Ltd.

Manufacturing Chemists,

4 OLIVER'S YARD, CITY ROAD,

Telephone No.: 10586 Central **LONDON, E.C.** Telegraphic Address: 'Siccative, London.'

JAMES J. HICKS,

Manufacturer of Clinical and Scientific Instruments,

8, 9, & 10 HATTON GARDEN, LONDON, ENGLAND.

OBTAINED GRAND PRIX, FRANCO-BRITISH EXHIBITION, LONDON, 1908.



The use of Armlets, Taps, and Mercury is entirely obviated. In size no larger than Clinical Thermometer. Zero adjustment is automatic.

10 - Post FREE

Readings identical with Riva-Rocci and Hill-Barnard Systems.

SPHYGMOMETERS

ON THE

HILL-BARNARD SYSTEM.

RIVA-ROCCI SYSTEM.

With Dr. MARTIN'S MODIFICATION.

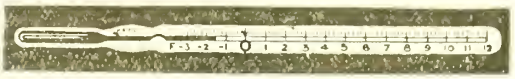
With Mr. LOCKHART-MUMMERY'S MODIFICATION.

DESCRIPTIVE PAMPHLET POST FREE.

THE LATEST IMPROVEMENT.

THE "USHER-SOMERS"

(PATENT 1908)



IS THE CLINICAL THERMOMETER OF THE FUTURE.

It is the only Thermometer which registers the heat of the body in direct relation to its normal temperature. Each figure on the instrument represents a degree of temperature in the Fahrenheit scale either above or below the Normal Standard of Health, viz.:—98·4 Fahrenheit, which is marked 0 on these thermometers. For direct reading and the absence of all possibility of error, its simplicity commends it to every household, and it is so simple that it can be read by a child.

Sole Maker: JAMES J. HICKS.

CLINICAL THERMOMETERS

As a Wholesale Manufacturer to the Trade I do not deem it advisable to publish prices, but correspondents may always have lowest quotations by return mail, and I offer most exceptional terms to large buyers.

FIFTY DIFFERENT VARIETIES TO SELECT FROM.

Illustrated Price Lists Free.

Druggists' Turned White Wood Boxes

of every description,

These Boxes are made from Selected White —— Willow Wood, and finely finished. ——

They are very cheap, from **1 -** per gross upwards. WOODEN BOTTLES and VIALS also from **1/-** per gross upwards.

Inventors and Patentees of

SILICATED GREASE-PROOF BOXES

A boon to Ointment Manufacturers. A perfect substitute for a Covered Pot.

Unbreakable and very light, and saves half the duty in Countries where it is charged on the gross weight.

See that each Silicated Box is Stamped on the bottom with our Stamp, to avoid worthless imitations.

SILICATED GREASE PROOF PATENT BOXES

PRICE LIST AND SAMPLES ON APPLICATION.

ROGERS & CO., Carter St., Walworth, London, S.E.

STIPENDUM CORK STOPPERS

in all sizes suitable for KALIS, CITRATES, DISPENSING, and all FLUIDS.

STIPENDUM

COVERED POTS

THE BEST FOR FACE AND TOOTH POWDERS, PASTES, AND OINTMENTS.

GREASE PROOF.

For Samples and particulars apply to

The

Stipendum Stopper Co.

1 Newman Street,

LONDON, W.

Tel. No. 3769.

GERRARD.

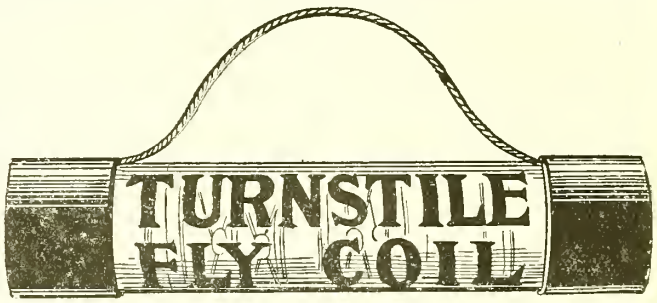
Ford, Shapland & Co.

Chemists' and General Printers, &c.

6 Great Turnstile, High Holborn, LONDON, W.C.



The Cleanest and Most Effective.
Specially suitable for Export.
6s. per gross.



Very Effective, Clean, and easily opened.
66 per gross.

The "SWALLOW" STICKY FLY PAPER.
5s. per gross.

CHEMICAL FLY PAPERS.
Guaranteed to be thoroughly effectual. Printed with own Name and Address, and advertisements on the four sides.
1,000 **13s.**; 2,000 at **14s.**; 3,000 at **13s.**; 5,000 at **12s.**; 10,000 at **11s.**

TOILET ROLLS

WRITE FOR SAMPLES AND PRICES.

LABELS
of every description.
Chemists' Slip Labels, from 1/- per 1,000.
Chemists' Pill Labels, from 1/3 per 1,000.

Illustrated Counter Bills

Ordinary Counter Bills
On White or Assorted Tinted Paper.
Specimens and Prices on Application.

Almanacks & Calendars
for 1910.

Window Bills and Cards
Stocked in great variety.

Cabinet Paper
For the Water Closet.
In Registered Shape Boxes and in Packets.
Samples and Prices on application.

FOLDING
Cardboard Boxes
Plain or printed in Choice Designs for putting up Specialities.

Price Lists, Pamphlets, Circulars, Billheads, Memorandums, Cards, Prescription Envelopes.

And all kinds of Printing and Stationery required by Chemists, at most moderate prices.

POSTERS
For Chemists' Specialities, &c.

Bookbinding
AND
Account Book Manufacturing
IN ALL BRANCHES.

Prescription Books Ledgers, and Account Books.

Demy Paper, and Wrapping Paper for Chemists, Twine, Sealing Wax, &c.

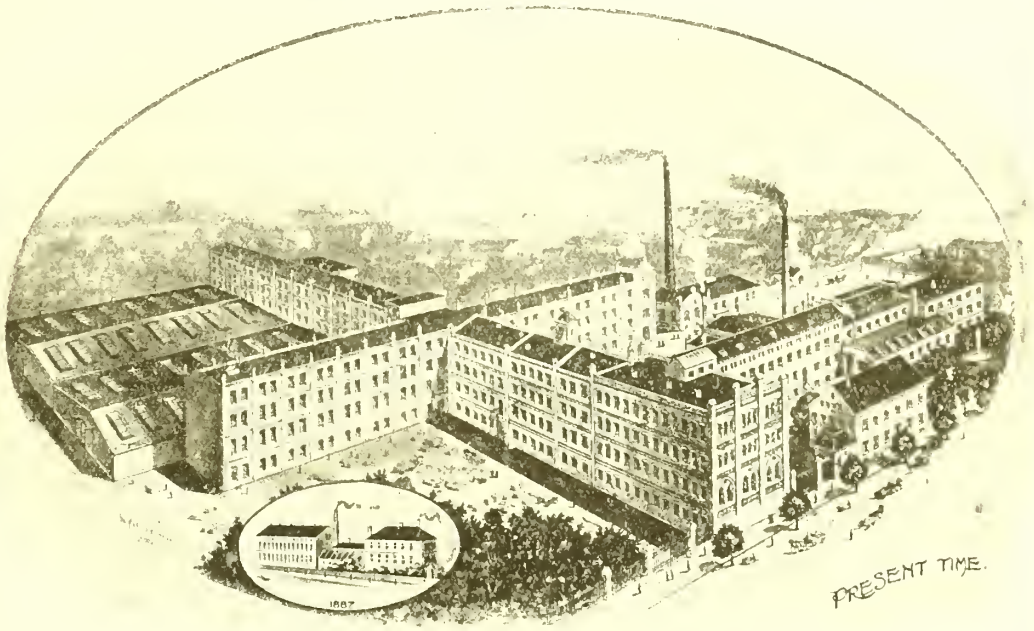
Agents for
Registration of Trade Marks
Designs furnished if required.

TRADE  MARK.

MANUFACTURERS OF

SPECTACLES AND EYE-GLASSES

IN GOLD, ROLLED GOLD AND "RATENOID."



OPTICAL WORKS, RATHENOW.

OUR MANUFACTURES HAVE A WORLD-WIDE REPUTATION.

WE HOLD LARGE STOCKS. PROMPT DELIVERY ASSURED.

Catalogue sent on receipt of Trade Card.

NITSCHE & GÜNTHER,

OPTICAL WORKS,

66 Hatton Garden, London, E.C.

HOW TIME FLIES.



I can hardly believe that it is three-and-a-half years ago since I issued my first half-inch advertisement in the Supplement of this paper, offering to INCREASE YOUR BUSINESS.

Since then nearly 650 Chemists' businesses have passed through my books (50 of these Colonial) with wonderful results, the successes averaging 92 per cent.

HOW I INCREASE BUSINESSES

As regards England, Scotland and Wales the procedure generally followed is this. First you send for my FREE booklets, references, &c. Having read same, if you are wise, you will write to two or three references who have businesses of a similar character and in similar size towns or villages to your own. Having received proof which would satisfy a marble statue, you send your cheque for my modest fee, and by return I make a prompt appointment to call at your Pharmacy whether it be at Land's End or John o' Groats.

When I call I diagnose you, the style of business, and the possibilities of the neighbourhood, pointing out sources from which new trade can be tapped, showing you how also more trade and more profit can be secured from your present customers.

My work after is to get you, by my system of business increasing, sufficient new profit, say £50 nett in the first twelve months, to justify you in paying a renewal fee, and we then try to beat our previous success.

We work together, and as I was about twenty years in the Drug Trade myself, I avoid the errors and oversights that an ordinary Advertising Agent falls into through lack of this "behind the counter" knowledge.

For twelve months after the interview I send you, fourteen days before they will be required, my Advices (4 of them) for the following month's campaign, including Window Show.

The procedure for the Colonies and Ireland is much the same, except that very full particulars are supplied by the Chemist, in writing, as interview on account of distance is impossible, and the fee is £1 1s. less, there being no interview expenses.

FINALLY, MR. CHEMIST,

If you are really in earnest and wish to increase your business, write for Free Booklets; if you are in a large town or city, mention your rivals—that is chemists who clash with you—and providing I am not already booked by one of them, and you wish my services, they are at your service. But do not delay. Remember my first and second clients are on my register to-day and simply dozens who temporarily left me, to try other systems, are one by one returning to my fold.

I take no other trades but Chemists; I do no other work but this. It is my hobby, and, as a London Chemist said of me "I think of it by day, and dream of it by night."

BERNARD SLACK, PRINCES CHAMBERS, **WOLVERHAMPTON.** Tel. 581.

F. DARTON & CO.

Manufacturing Opticians,

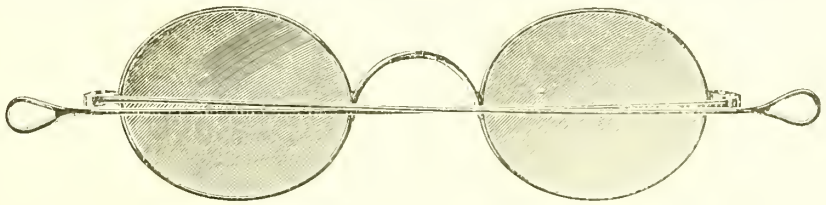
142 St. John Street & 52 Clerkenwell Road, LONDON, E.C.



CYCLISTS' GOGGLES, in cases, per doz. 6/-, 7/6, 10/6 & 18/-

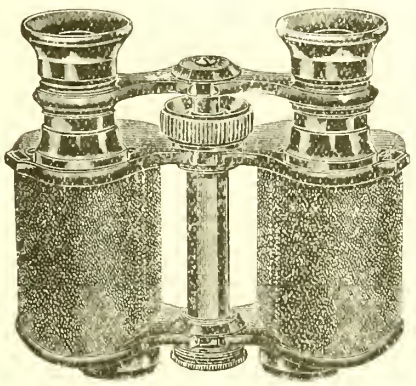
ILLUSTRATED LIST OF

CYCLISTS' and MOTOR GOGGLES and TINTED EYE PROTECTORS, post free.



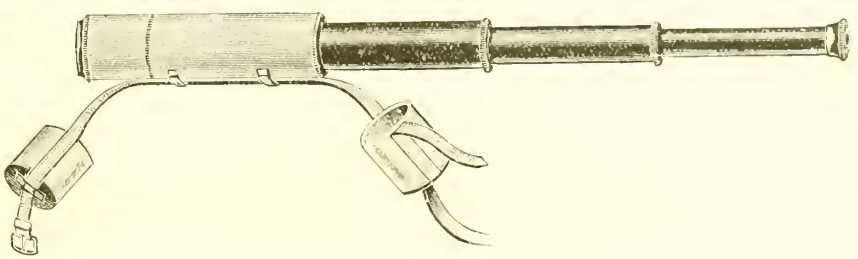
We hold a large Stock of all kinds of Tinted Spectacles and Folders.

CHEMIST-OPTICIANS should now renew their stock for this season.



Our NEW PRISMATIC BINOCULAR magnifies 8 times, with jointed bar and centre adjustment, in solid leather case with strap,

£3 15s.



ARMY REGULATION TELESCOPE with caps and sling, 1½ in. object glass,
£1 11s. 6d.

List of Field and Opera Glasses and Telescopes free.

COMPRESSED TABLETS

Manufactured by

THOMPSON & CAPPER, 51 Piccadilly, Manchester.

Thompson & Capper are now compressing Tablets on a large scale, and are prepared to supply them either in bulk or packed with Chemist's own name on each bottle.

The following are a few examples from their new list :--

	Grs.	Per Doz. Bottles each containing 25	50	100	Price per lb.	Price per 1,000
Acetanilide (Antifebrin)	3	1/9	3/3	5/-	3/-	1/9
Aloin Co. (Anti-Constip.)	-	1/9	3/3	5/-	—	3/3
Ammon. Brom.	5	2/-	3/6	6/-	2/6	2/-
„ Chloride	5	1/9	3/3	5/-	2/-	1/6
Ammoniated Quinine (Approx. 1 drachm)	-	2/9	4/9	8/9	6/9	6/-
Antipyrin	5	3/6	6/6	10/6	8/6	6/6
Aspirin	5	6/6	12/6	22/-	18/-	16/6
Bismuth Carbonate	5	3/6	6/6	10/6	—	7/6
Bismuth Subnit. and Sod. Bicarb.	aa. 2½	3/3	5/6	10/-	6/6	5/3
Bismuth Subnit. c. Sod. Bicarb. and Rhubarb	-	3/3	5/6	10/-	6/6	5/3
Caffein	2 in 5	3/-	5/6	10/-	7/6	5/6
„ 1 gr. and Antipyrin, 3 grs.	-	3/9	6/6	10/6	10/-	7/-
Calomel	½	1/9	3/3	5/-	8/6	1/3
„	2	2/-	3/-	6/-	5/3	2/6
Cascara Sagrada (S.C.)	2	1/6	2/9	3/6	3/2	2/6
„ „ (Uncoated)	2	1/6	2/9	3/6	3/2	2/6
Dover's Powder	5	2/6	4/-	7/-	5/6	4/-
Ginger Mint (B.P.C.)	-	1/6	2/9	4/-	2/8	2/-
„ „ (T. & C.)	-	1/4	2/6	4/-	2/-	1/6
Gregory Powder	5	2/-	3/6	5/6	3/6	3/-
Grey Powder	1	1/6	2/9	5/-	4/6	1/3
Phenacetin	5	1/9	3/-	5/-	4/-	3/6
„ and Caffein	-	2/-	3/9	7/-	5/-	4/6
Pot. Bicarb.	5	1/6	2/3	3/6	1/2	1/-
Pot. Brom.	5	2/3	3/9	6/3	2/9	2/6
Pot. Chlor.	5 (40's)	1/4	—	2/3	8d.	7d.
„ „ and Borax	- (40's)	1/4	—	2/3	11d.	8d.
„ „ Borax, and Cocaine	-	2/-	3/-	4/-	2/8	1/10
Quinine Sulph. (S.C.)	1	2/-	3/-	4/6	—	3/6
„ „ (S.C.)	2	2/9	4/6	6/9	7/3	6/-
„ „ (Uncoated)	5	3/9	6/6	10/6	12/-	11/-
Rhubarb	5	1/8	3/3	5/-	4/3	2/6
„ Soda, and Ginger	-	1/8	3/3	5/-	3/-	2/-
Saccharin	½ (200's)	7/6	2/6	4/6	20/-	3/2
Salol	5	2/6	4/3	7/6	4/6	4/-
Salicin	5	6/9	11/6	22/-	20/-	18/-
Soda Mint (Best)—English Oil	5 (30's)	1/6	—	3/-	1/1	9d.
„ „ (Second) „ „	5 (30's)	1/4	—	2/6	11d.	7d.
Soda Bicarb. (Best)	5	1/4	2/6	4/3	1/-	9d.
„ „ (Second)	5	1/2	2/-	3/9	8d.	5d.
Sulphonal	5	4/3	7/9	14/6	10/-	9/-

All Tablets in bulk supplied in cardboard cartons (free) or in square glass nickel screw-capped bottles 3*d*. per 1,000 extra. Packed goods are put up in cartons containing one dozen bottles.

Chemist's own name and address printed on lots of not less than three dozen bottles. To avoid error in printing, each order should be accompanied by a slip label.

The prices above are for not less than three dozen bottles (assorted or otherwise). 3*d*. per dozen bottles extra on lots of less than three dozen.

TERMS.

Carriage — All goods are sent carriage paid to any address in the British Isles.
Payments — 2½% may be deducted if cash accompanies order, otherwise all prices are strictly net 30 days.
References — Satisfactory references required on opening new accounts, or cash against *pro forma* invoice.

SEND POSTCARD FOR FREE SAMPLE BOTTLE OF 25 TABLETS.

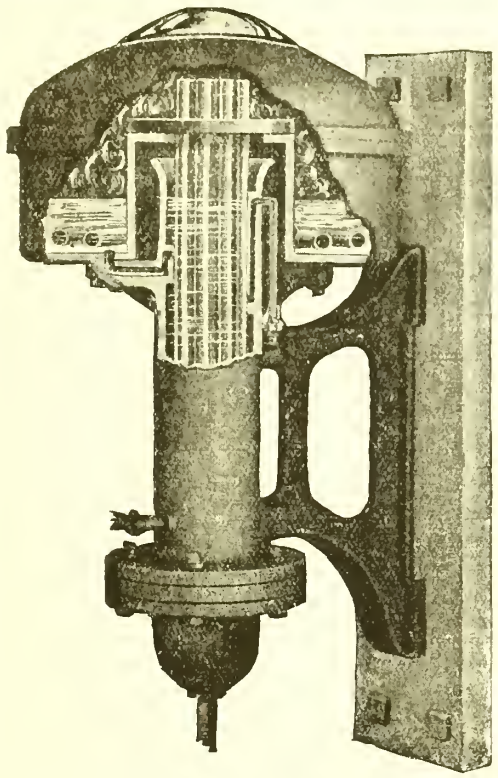
THOMPSON & CAPPER, *Manufacturing Chemists, . .*

51 Piccadilly, MANCHESTER.

Telegraphic Address: "SANITAS MANCHESTER." Telephone No. 9015 MANCHESTER. Code, 5th EDITION A.B.C.

F. J. STOKES MACHINE CO.

Manufacturers of every description of Pharmaceutical Machinery.



Automatic Water Still

THE STOKES AUTOMATIC WATER STILL marks a distinct advance in net efficiency over any other Still made, and no other Still will give so much and such pure water at so low a cost.

IN OPERATION.—The raw water enters the lower end of condenser and, in condensing the distilled water, is heated to the boiling point by the time it reaches the overflow. A port connecting the Still and condenser feeds this boiling water to the Still, and maintains a constant level. The action is therefore continuous.

THE DISTINCTIVE FEATURE of this Still is its novel construction, by which the steam generated in the Still is conducted down through the condenser, raising the temperature of the feed water to such a point that the ammonia gas is released and driven off. A further advantage of this preliminary boiling is that very little additional heat is required to vaporise it. It will thus be seen that this Still does two important things:—Purifies the water more completely than any other Still, and effects a very marked saving in steam. The steam and water systems are entirely distinct, so no oil from steam ever gets into the distilled water. All exposed iron surfaces are tinned to prevent corrosion.

ECONOMY.—Where low pressure steam is used, the cost of distilled water is practically nothing. If live steam from the boiler is applied, the net cost per gallon is about one-tenth of a penny.

ACTUAL TESTS of Still No. 2 show that using steam equivalent to 100 pounds at a pressure of 15 pounds and 125 gallons of condensing water, 10 gallons of distilled water were produced in one hour, showing that only 12 volumes of water were required for condensing in this Still as compared with 20 required by the next most efficient Still on the market.

This Still is made in the following sizes:—

No. 1.—Capacity, 5 gallons per hour.
No. 2.—Capacity, 10 gallons per hour.
No. 3.—Capacity, 25 gallons per hour.
No. 4.—Capacity, 60 gallons per hour.

Sole Agents:

THOMPSON & CAPPER,

51 Piccadilly, MANCHESTER.

Telegraphic Address: "SANITAS MANCHESTER." Telephone No., 9015 MANCHESTER. Code, 5th EDITION A.B.C.

BENNETT, SONS, & SHEARS, LTD.

Telegrams: "CUPRITE LONDON."

Engineers and Coppersmiths,

FARRINGDON WORKS, SHOE LANE, LONDON, E.C.

Telephones: 790, 794 HOLBORN.

MANUFACTURERS OF

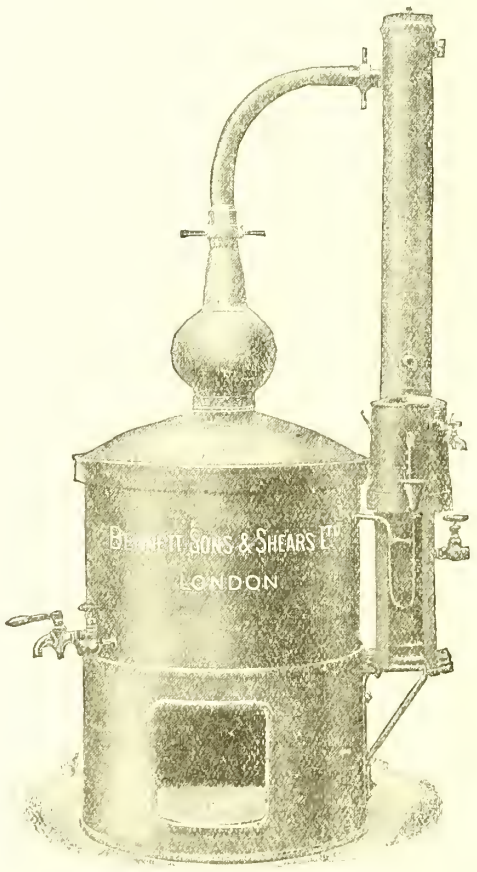
ESSENTIAL OIL STILLS

For extracting Oil from Leaves, Seeds, Bark, Herbs, and for re-distilling the Oil when separated.

The illustration represents a Copper Still with removable Copper Dome, with water Seal Joint, fitted with a perforated False Bottom and Steam Coil below, also a perforated Steam Coil for free steam; "Ideal" Patent Copper Condenser and Separator. All mounted on a Portable Stand, complete and self-contained for Colonial use.

PLANT for Complete Essential Oil Distilleries.

Contractors to — H.M. Government.

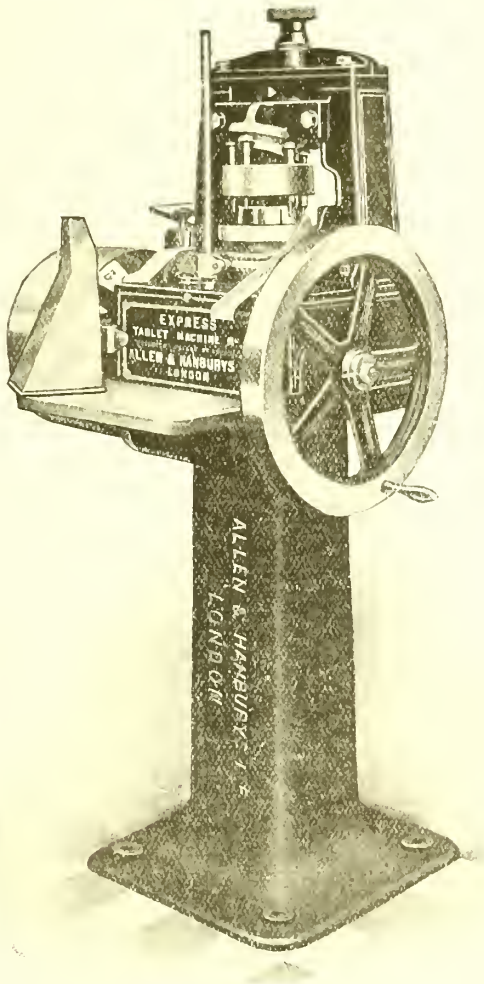


Lavender Stills.
Mint Stills.
Sandal Stills.
Clove Oil Stills.
Rectifying Stills.

Established over 100 YEARS.

Farringdon Works, Shoe Lane, LONDON, E.C.

The No. 2 Express Rotary TABLET MACHINE



Simple in Construction.
Noiseless in Action.
Friction and Wear reduced to a minimum.

POINTS OF SUPERIORITY

(1) The Machine has inclined conical rollers for obtaining the pressure. These are theoretically correct, and in practice are a great advance on the ordinary straight roller, which produces lateral friction and excessive wear. The angle of inclination is in exact relation to the radial path taken by the punches.

(2) There is only one set of punch bodies required for punches of different sizes. The punches are adjustable longitudinally to allow for wear; the life of the punch is therefore considerably lengthened. The dies are also reversible.

Price - - - £75.

With One Set of Punches.

(3) The Machine runs quite noiselessly due to positive action with no intermittent shocks. This is accomplished by means of specially designed and accurately cut worm gearing.

(4) The central die plate is mounted on a firm spindle, and is also held in a top bearing, thus ensuring absolute rigidity.

Both the Rotary power machine and the Duplex and B.B. hand tablet machines are designed and manufactured in our own Engineering Department at Bethnal Green.

The principal features and improvements mentioned above are fully protected by patents.

SOLE AGENTS · **BENNETT SONS & SHEARS, LTD., Farringdon Works, Shoe Lane, E.C.**

ALLEN & HANBURYS, Ltd., Bethnal Green, LONDON, E.

Contractors to the Indian Government for Tablet Machines.

TELEPHONE:
2673 LONDON WALL.

CONTRACTORS TO H.M. GOVERNMENT.

TELEGRAMS:
"SPRUCENESS LONDON."

E. BENNETT & SON, LTD.

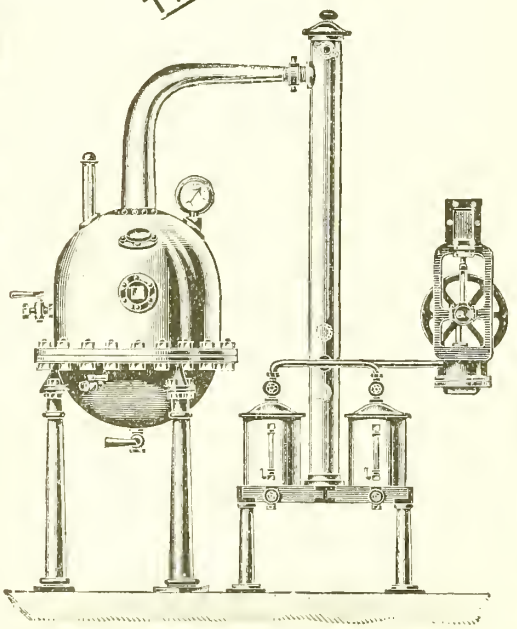
ENGINEERS & COPPERSMITHS,

MANUFACTURERS OF LABORATORY PLANT,

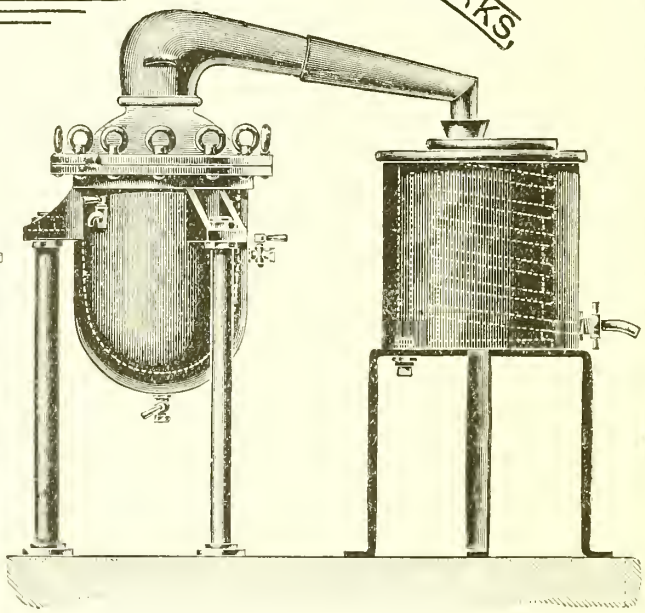
THE ALDGATE EAST COPPER & ENGINEERING WORKS,

7 ALDGATE EAST CHAMBERS,

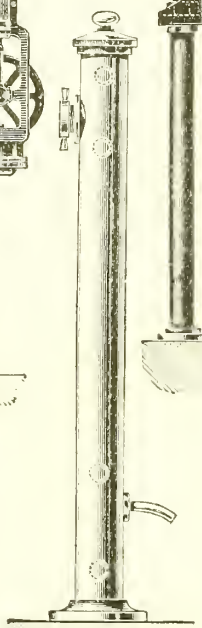
LONDON, E.



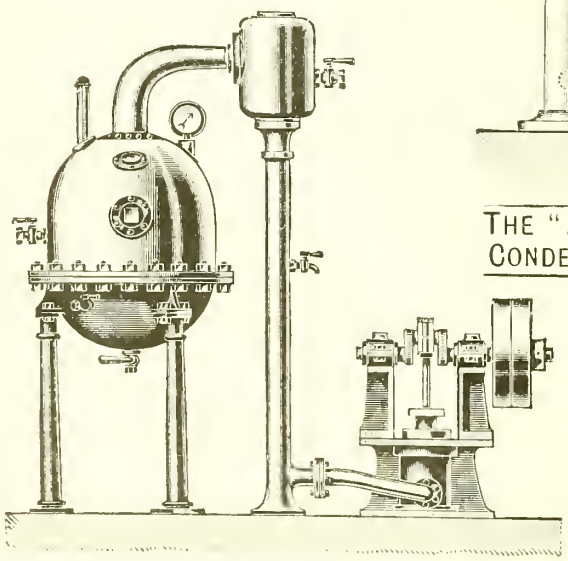
VACUUM STILLS.



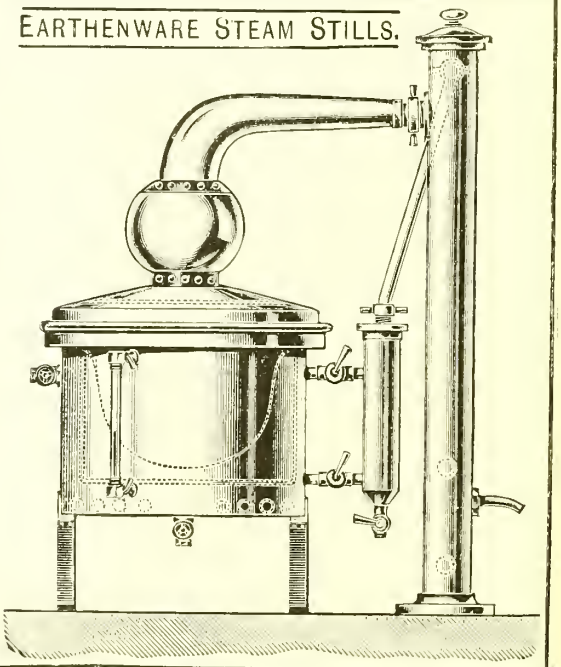
EARTHENWARE STEAM STILLS.



THE "ACME" CONDENSER.

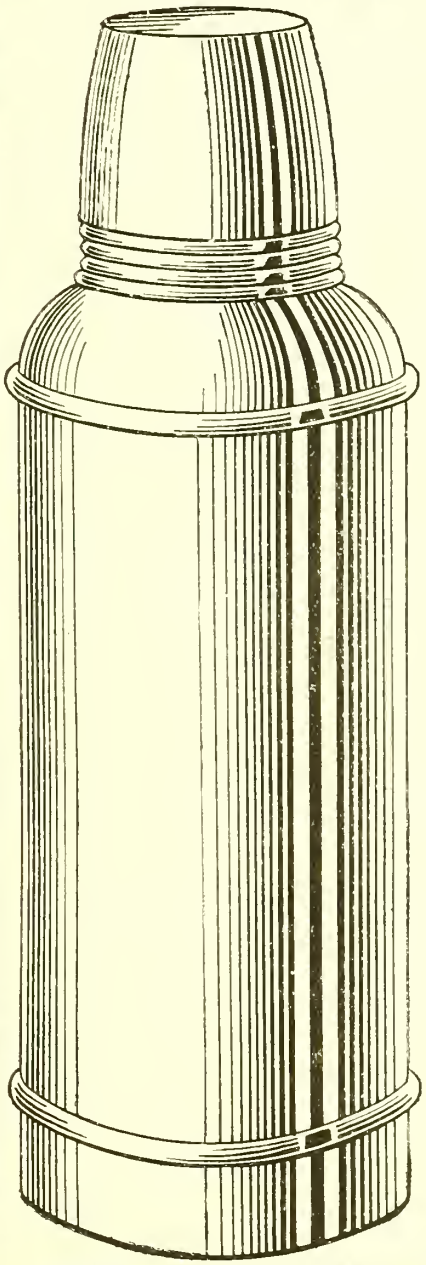


VACUUM PANS.



AUTOMATIC WATER DISTILLING APPARATUS.

THE THERMOS FLASK —for Lactonised Milk.



THERMOS Flask not only keeps liquids steaming hot for 24 hours and cold liquids icy cold for days without fire or chemicals, but by testing and experiments by able Medical Men it has been proved to be the easiest, simplest, and most effective mode of producing Lactonised Milk. The *modus operandi* is as follows:—

Heat your milk to a temperature from 105 to 110°—pour into **THERMOS Flask** with one tablet of Lactic Acid and a spoonful of sugar. Allow the milk to stand from 10 to 12 or more hours, and perfect Lactonised Milk is the result.

This means MINIMUM trouble— MAXIMUM results.

MEDICAL MEN ARE LARGELY RECOMMENDING THE FLASKS TO PATIENTS

Prices from 21- each PINTS and 31/6 each QUARTS.

They can be obtained of all CHEMISTS and DRUGGISTS, JEWELLERS, SILVERSMITHS, and STORES.

Wholesale only: A. E. GUTMANN & Co., 8 Long Lane, London, E.C.



Sparklet Bulbs

contain none of the Bicarbonate of Soda which makes ordinary Soda water so lowering to many people.

¶ But, if **Soda, Potass,** or **Lithia** waters are preferred,

"Sparkloids"

(compressed tablets of mineral salts) should be added to the cold water before aerating.

¶ A facsimile of **Vichy** or **Carlsbad** water can be reproduced in the same simple way.

SPARKLETS

R·J·W

"Prana"

Sparklet Syphons

Small size .... 22/6 per doz. net.
Retail 2/6.

Double sized .... 39/- per doz. net.
Retail 4/-.

Sparklogenes .... 72/- per doz. net.
(69/- if not less than ½ dozen ordered).
Retail 7/9.

"Prana"

Sparklet Bulbs

for use with all the above.

B size .... 13/- per doz. boxes (subject).

Retail .... 1/4 per box.

Note :—All Prana Sparklet Goods are on the P.A.T.A. List.

Aerators Ltd., Upper Edmonton, London, N.

"Prana"

Sparkloids.

Soda
Potass
Seltzer
Vichy
Carlsbad

4/- per dozen (subject)
Retail 6d. per bottle.

Lithia—8/- per dozen (subject).
Retail 1/-

"Prana"

Fruit Crystals.

Lemon
Lime
Raspberry
Ginger Beer
Orange
&c.

7/- per dozen (subject)
Retail 9d. per tin.

Kola
Menthe (Peppermint)
Brew (Iron and Quinine)

9/- per dozen (subject)
Retail 1/- per tin.



Fill the

Sparklet Syphon

at home with water from the ordinary drinking supply, aerate the water with a Sparklet Bulb, and thus produce

Pure . . . Aerated Water

for a trifle over 1½d. per Syphon, or 2½d. per full-sized (40-oz.) Syphon.

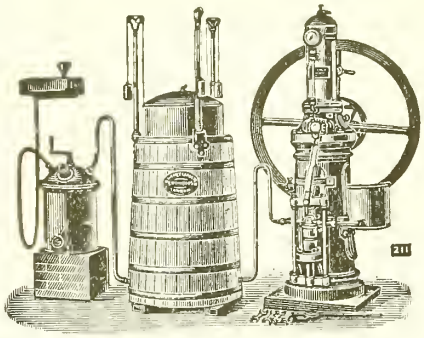
¶ If any doubts are entertained as to the purity of the water supply, the water can be boiled or filtered before aerating.

SPARKLETS

R·J·W

Aerators Ltd., Upper Edmonton, London, N.

THE BEST HOUSE IN THE WORLD for all requirements — of the — MINERAL WATER TRADE



THE "NIAGARA."

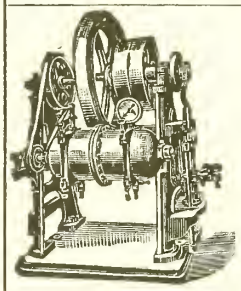
This type is fast superseding all other makes, and is used in the leading manufactories of the world.

Size	Producing capacity per day	Price, with gas-making apparatus
X	100 dozen	£30
W	300	£45
U	450 ,,	£52
T	600 ,,	£70
S	1,200 ,,	£85
R	2,500 ,,	£135

Are all Fitted for Hand and Power.

NOTE.—We *include* all necessary Connecting Pipes free *without extra charge*, so that the machinery is ready for work upon arrival.

FOR LARGER SIZES SEE CATALOGUE.



THE "LILLIPUTIAN."

Complete with Gas-making Apparatus, all pipings and connections included.

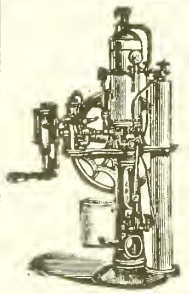
No. 1 size, producing 600 dozen in 10 hours £62 0 0
No. 2 ,, ,, 1,000 ,, ,, ... £75 0 0

No. 1 is fitted for Hand Power; No. 2 for Motive Power.

THE "LANCASHIRE."

Complete with Gas-making Apparatus, all pipings and connections included.

No. 0 size producing 2,500 dozen in 10 hours £165 0 0
No. 1 ,, ,, 1,500 ,, ,, ... £131 0 0
No. 2 ,, ,, 1,200 ,, ,, ... £100 0 0



THE "COMPACT."

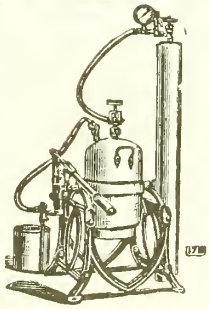
For Use with Compressed Carbonic Acid Gas.

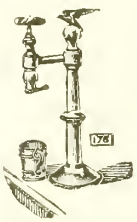
In use by the leading Chemists, Hotels, Hospitals, and Public Institutions throughout the United Kingdom.

THE MOST SUCCESSFUL MACHINE OF THE TIMES THE PERFECTION OF SIMPLICITY. AUTOMATIC CARBONATION.

PRICES:

No. 1.—Capacity 1,200 dozen per day, including Filling Machines for Bottles *and* Syphons £60 0 0
No. 2.—Capacity 600 dozen per day, including Filling Machines for Bottles *and* Syphons £48 0 0
No. —Capacity 300 dozen per day, including Filling Machines for Bottles *or* Syphons £33 0 0





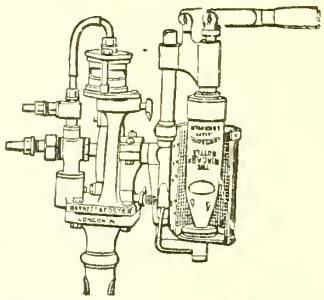
THE "CYLINDER" SODA WATER PLANT.

This is a Cheap Apparatus, designed for use with Compressed Carbonic Acid Gas, for serving Soda Water on the counter by means of a silver-plated counter stand.

PRICES FROM £15.

Specially suitable for Hotels, Chemists, Confectioners, Pastrycooks, &c.

THE "IDEAL."

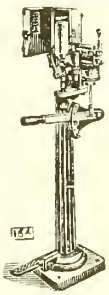


With Syrup Pump £9 9 0
Without Syrup Pump .. £7 7 0

FILLING MACHINE, for "Codd's Niagara" and all kinds of Internal Stoppered Bottles.

The Quickest and most reliable Filling Machine on the market. SYRUPS AND FILLS AT ONE OPERATION. No Waste.

THE "GALWAY."



With Syrup Pump .. £10 10 0
Without Syrup Pump £5 5 0

FILLING MACHINE FOR SYPHONS.

THE SIMPLEST OF ANY SYPHON FILLER YET INTRODUCED.

BALL-STOPPERED BOTTLES, SYPHONS,



AND CORK BOTTLES
AT LOWEST RATES.
Prices upon application.

SPECIALITY: "RED CLUB BRAND" SOLUBLE ESSENCES.

Shipped in Bond. . . . Prices and Samples on application.

BARNETT & FOSTER, "Niagara Works," 26T Eagle Wharf Road, London, N.

Branch House: Johannesburg, P.O. Box 1316; Manager, Mr. CARL ALBERT.
Cape Town, P.O. Box 1391; Manager, Mr. F. G. INGRAM. } Stocks held.
Indian Agents: S. FITZE & CO., Ltd., Bombay, Calcutta, Karachi.

BARNETT & FOSTER,

Essence Distillers and Manufacturing Chemists to the

Aerated Water, Brewing, and Confectionery Trades.

RED CLUB BRAND

CONCENTRATED SOLUBLE ESSENCES
CONCENTRATED FRUIT ESSENCES
CORDIAL & LIQUEUR ESSENCES
PURE ESSENTIAL OILS

RED CLUB BRAND

HARMLESS LIQUID COLOURINGS FOR AERATED BEVERAGES.
HARMLESS COLOURS IN POWDER FOR CONFECTIONERY.
"NIAGARA" SOLUBLE HEADING POWDER.

"NIAGARA FOAM."

A Highly Concentrated Heading Liquid for imparting a rich, close, creamy, and lasting head to Beverages of all kinds.

LIQUID AND SOLID PRESERVATIVES.
PURE SALTS FOR MINERAL WATERS.

"NIAGARA" SPRING WATER CRYSTALS.

For greatly increasing the amount of Carbonic Acid Gas absorbed, thus rendering Aerated Water brisker and more sparkling.

EXTRACTS FOR BREWING NON-ALCOHOLIC BEVERAGES.
FININGS FOR SYRUPS, BEERS, WINES, AND CORDIALS.
CONCENTRATED VINEGAR ESSENCE.

All Herbs, Drugs, Chemicals and Materials employed by

MINERAL WATER MAKERS, BREWERS, CONFECTIONERS, LIQUEUR AND CORDIAL BLENDERS.

MONTHLY LIST ON APPLICATION.

☞ Orders for Two Gallons and upwards of Essences can be shipped in bond. This quantity may be made up of different Essences, and the Bottles may be of different sizes.

Indentors when ordering should specify "RED CLUB BRAND."

Telegraphic Address—"DRINKS, LONDON."

Office and Laboratories:

NIAGARA WORKS, 26 EAGLE WHARF ROAD, LONDON, N.

See opposite page.

Established 1855. **ROBINSON'S ORIGINAL** Excise Drawback on Export Orders.

CONCENTRATED WATERS.

STANDARDISED TO B.P. 1898.

When diluted in the proportion of one part to forty parts of water at 60° temperature, they faithfully represent the Medicated Waters of the British Pharmacopœia. They are always of uniform strength, and will keep good any length of time in any climate.

Aqua Amygd. Amar. Conc. (U.S.) 4/- per lb.	Aqua Cassiæ Conc. ... ... 4-per lb.	Aqua Menth. Virid. Conc. ... 4/- per lb
,, Anethi, Concent. ... ... 4/- ,,	,, Flor Aurant. ... ... 8/6 ,,	,, Pimentæ ,, ... 4/- ,,
,, Anisi ,, ... 4/- ,,	,, ,, Sumbuci Conc. ... 8/6 ,,	,, Pulegii ,, ... 4/- ,,
,, Camphoræ ,, ... 4/- ,,	,, Fœniculi Conc. ... ... 4/- ,,	,, Rosemarini ,, ... 4/- ,,
,, Carui ,, ... 4/- ,,	,, Menth. Pip. Conc. ... 4/- ,,	,, Rosæ ,, ... 8/6 ,,
,, Cinnam. Ver. Conc. ... 6/- ,,	,, ,, Ang. Conc.... 6/- ,,	,, ,, Virgin ,, ... 10/6 ,,

The above may be had in ¼-lb., ½-lb., or 1-lb. Bottles and upwards, through most of the Wholesale Drug Houses.

Each Bottle has the Inventor's Protection Label over the cork, without which none are genuine.

SUPERIOR ORANGE WINE (Vin. Aurantii, B.P. 1898).

Samples of any of the above sent free on application from

R. ROBINSON & CO., LTD., Distillers and Brewers of British Wines **CHURCH ST., PENDLETON, MANCHESTER.**

Telephone: 138 Pendleton.

A. MILLAR & CO., LTD., DUBLIN.

PURE ORANGE WINE

(VINUM AURANTII, B.P.), prepared in strict accordance with the Formula of the British Pharmacopœia. (Wholesale only.)

WRITE FOR SAMPLES TO 10, 11, and 12 THOMAS STREET, DUBLIN.

Wholesale Drug Houses are invited to write to

MELROSE-DROVER, LTD.

LEITH.

for Prices and Samples of NON-DEPOSITING

ORANGE WINE

B.P. 1898.

considered the best in the Market due to superior quality. Specially prepared, also for exportation.

THE GREAT

SYPHON FILLER

Is the "Consol."

A purely business machine. No labour, no power, automatic. Best aeration. Four syphons filled for a penny.

Send for Catalogue and sheet of Chemists' testimonials.

British Automatic Aerators, Ltd.

22, 24 & 26 PAUL STREET, FINSBURY, LONDON.

Telegrams: "Consolaris." **Telephone: 6329 Central.**

SAPONINE

(SOLUBLE),

MANUFACTURED BY

C. W. FIELD,

Cambrian Mills, LIVERPOOL.

Special Terms to Wholesalers and large Consumers.

GREAT WESTERN RAILWAY.

INDUSTRIAL SITES.

Sites suitable for the establishment of Factories and Works are available adjoining the Great Western Railway, within easy access of the principal ports, Coal and Iron fields, and Industrial centres. Particulars of such sites, and of the Company's arrangements for Siding Facilities, Conveyance Rates, &c., &c., may be obtained from the Chief Goods Manager, **Mr. T. H. RENDELL, Paddington Station, W.**

JAMES C. INGLIS, General Manager.

Saponine

Patented in Gt Britain, Germany, France, Austria, & U.S.A.

FOR THE PRODUCTION OF

Foam in Beverages.

Saponine produces a lasting foam in such beverages as Soda Water. It is the best and only material for the manufacturing of

GUM FOAM, LIQUID GUM, &c.

No Boiling or Filtering required.

ABSOLUTELY SOLUBLE.

Possesses all the advantages of Soap Bark without its drawbacks.

Stocks held by my Sole Agents for the United Kingdom: Messrs. PETRI BROS., 30 Lime Street, London, E.C.
For Australia and New Zealand:—Messrs. MAURI BROS. & THOMSON, Ltd., 46 & 48 York Street, Sydney.
For the United States of America:—Messrs. H. LIEBER & CO., 1 Platt Street, New York.

MY AGENCY FOR ALL OTHER COUNTRIES TO BE LET.

DR. RICHARD STHAMER,

Chemical Works, Hamburg 8.



THE NATURAL MINERAL WATERS OF

VICHY

(STATE SPRINGS)

CÉLESTINS For Diseases of the Kidneys, Gravel, Gout, Rheumatism, Diabetes, &c.

GRANDE-GRILLE For Diseases of the Liver and Biliary Organs, &c.

HOPITAL For Stomach Complaints, Indigestion, &c.

VICHY-ÉTAT PASTILLES Two or three Pastilles after each meal facilitate digestion.

VICHY-ÉTAT COMPRIMÉS For instantaneously producing an effervescing alkaline water.

Price Lists, Show Cards, Dummy Bottles, Pamphlets, &c.

CAUTION.—Each Bottle from the STATE SPRINGS bears a neck lable with the word "VICHY-ÉTAT" and the name of the SOLE AGENTS:—

INGRAM & ROYLE, LTD., 26 UPPER THAMES STREET, E.C. And at LIVERPOOL and BRISTOL.

"SOLAZZI" LIQUORICE JUICE

THE CHEMISTS' BRAND.

'The Lancet' says: 'Of Standard Purity'

Recommended also by '*The British Medical Journal*,' '*Health*,' '*The Chemist and Druggist*,' '*Food and Sanitation*.'

ASK FOR SHOWCARDS AND HANDBILLS. To be obtained of all Wholesale Houses.

EXTRACT OF LIQUORICE and MENTHOL PELLETS.

CUSHION SHAPED.

THE ORIGINAL AND THE BEST.

3s. 6d. per lb. Also in Tins at 2- and 4/- doz.

E. ERNEST JACKSON,

Telegrams: "Jackson Crediton."

Crediton, Devon, & 291 Kingsland Road, London, N.E.

TO AERATED WATER MANUFACTURERS.

DELICIOUS

AERATED BEVERAGES

ARE MADE FROM



HAY'S

Cream Soda Essence,

Cream Lemon Essence,

Cream Raspberry Essence

(MADE FROM THE FRUIT),

Cream Strawberry Essence

(MADE FROM THE FRUIT),

Claret and Lemon Essence,

Cherry Cider Essence,

Lemon Squash Essence

(BRIGHT OR CLOUDY),

Lime Juice and Soda Essence,

Kola Champagne Essence,

Orange Champagne Essence,

AND

'Pale Dry,' Ginger Ale Essence.

SAMPLES AND FULL DIRECTIONS FOR USE FREE ON APPLICATION.

ATTRACTIVE LABELS AND SHOWCARDS SUPPLIED.

Orders for Two Gallons and upwards of Essence may be shipped under Bond.

Indentors when ordering should specify HAY'S Manufacture.

WILLIAM HAY, LTD., Manufacturing Chemists, **HULL & LONDON.**

Head Office and Laboratories—HULL, ENG. London Depot—3 YORK STREET, WALWORTH, S.E.
All inquiries to be addressed to Head Office.

CARLSBAD SPRUDEL-SALT

The Natural and only Genuine. Now on the P.A.T.A.

Single Dozens, **20/-** per doz., net quarterly a/c.
Gross Lots, **18/6** „ „ monthly a/c. } **Carriage paid upon any quantity.**

The Minimum selling price to the Public has been fixed at 2/- per Bottle, showing Retailers a profit of 20% to 30%

Chemists should note that **The Only Genuine Carlsbad Salt** is that prepared by the **Municipality of Carlsbad**, and known as the **NATURAL CARLSBAD SPRUDEL-SALT**, and as it is largely prescribed by the leading Medical Men throughout the country, a stock should always be kept on hand.

Showcards and Pamphlets forwarded free on application to the Sole Agents:

INGRAM & ROYLE, LIMITED,

Importers & Exporters of all known Natural Mineral Waters, Salts & Pastilles,

EAST PAUL'S WHARF, 26 UPPER THAMES STREET, LONDON, E.C.

And at 19 South John Street, Liverpool, and Bath Bridge, Bristol.

Telegraphic Address—"SACARINO LONDON." **Telephone Nos. 197 Bank and 1529 Central.**

The Saccharin Corporation, Ltd.

Offices—165 Queen Victoria Street, London, E.C.

SACCHARIN, *Made in England.*

Highest Possible Strength.—550 times sweeter than pure Cane Sugar. This strength is recommended in preference to any other.

Ordinary Strength.—330 times sweeter than pure Cane Sugar.

Soluble.—500 and 300 times sweeter than pure Cane Sugar.

Crystals.—450 times sweeter than pure Cane Sugar.

Crystallose.—440 times sweeter than pure Cane Sugar.

N.B.—The Three last Strengths are Soluble in Cold Water.

THE SACCHARIN CORPORATION, LIMITED, are the owners of All Patents for the United Kingdom and Colonies, except India and Canada, for the commercial manufacture of Saccharin, and their Saccharin is the only Saccharin that can be purchased without RISK OF LEGAL PROCEEDINGS or the necessity of ANY INDEMNITY.

The Saccharin Corporation. Ltd.

Manufactory—8 and 9 Ewer Street, Southwark, London, S.E.

IDRIS Table Waters

. . IN . .

Chinaways.

The only syphon which fully ensures avoidance of the contents coming into contact with metal.



As supplied by Royal Warrant of Appointment to H.M. THE KING.



Idris Soda Water . in Chinaways .

Will be found much superior to Soda Water drawn from any other syphon, being much sharper, owing to the absence of valvular obstruction in Chinaways. The water possesses the brilliancy and sparkle characteristic of IDRIS.

IDRIS & CO., Ltd., CAMDEN TOWN, : LONDON, N.W..

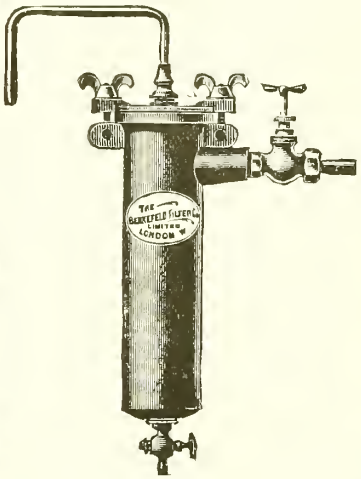
Branches—Liverpool, Southampton, Canterbury & Teddington.

THE BERKEFELD FILTER CO., LTD.

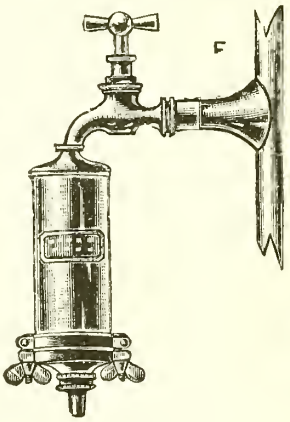
Telegrams: "TUBIPORES LONDON." **121 OXFORD STREET, LONDON, W.** Telephone: 3994 GERRARD.

Contractors to H.M.'s Government: Admiralty, War Office, India Office, Crown Agents for the Colonies, Office of Works, &c., and many Foreign Governments.

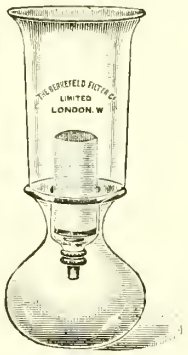
The "BERKEFELD" FILTER is a GERM-PROOF FILTER & is made as Pressure, Drip, Pump & Syphon Filter.



One-seventh original size. Pattern H, 30/-

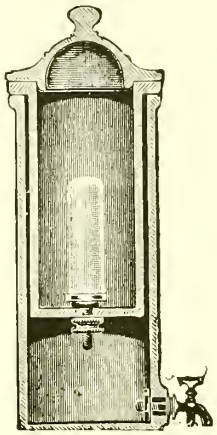


One-sixth original size. Pattern F, 22/6

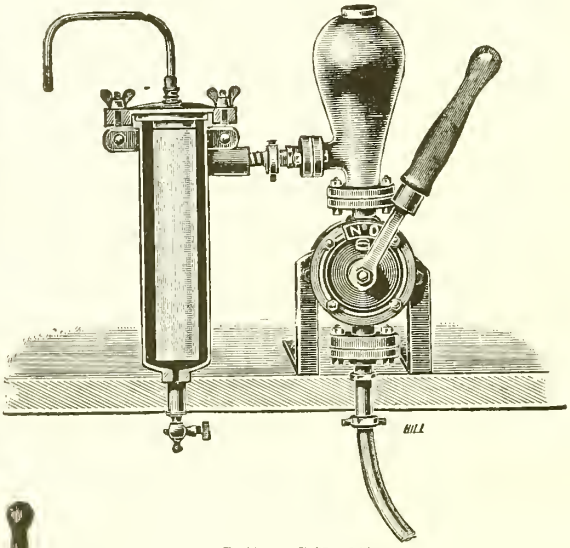


Pattern A.

2½ pints ...	7/-
5 ,, ...	8/6
6 ,, ...	10/-



B1	2	3	4	Pattern B
1	1	2	3	No. of Cylinders
1½	2½	4	6	gall. total capacity
14/6	19/9	29/9	42/6	

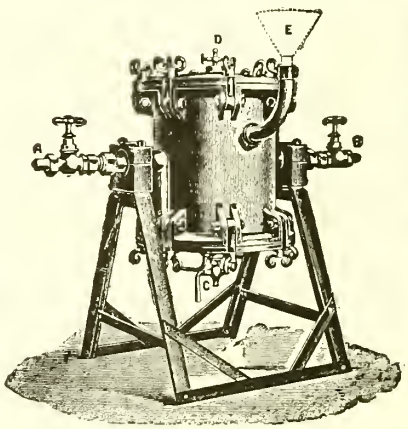


Pattern S.H., 90/-
Smaller Size, Pattern S.F., 70/-

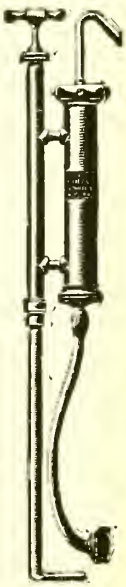
LARGE SUPPLY FILTERS.

Fitted with 3, 7, 15, 25 and 36 Cylinders.

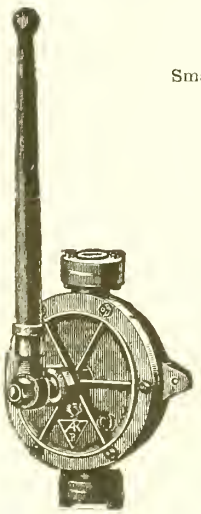
Most essential for Mineral Water Manufacturers.



P 3	£4	0	0	T 15	£16 10 0
P 7	£7	10	0	T 25	£21 10 0
				T 36	£28 0 0



Pattern N.
Without Stirrup, 35/-
With ,, 42/-



"WINCO" SEMI-ROTARY WING PUMPS.

CHEAP. DURABLE. RELIABLE.

Over 2,000 have been supplied to H.M.'s Government and given complete satisfacti on.

No.	Size of Suction and Delivery Pipes	Approximate Weight.	Total Height without Loose Flanges.	Approximate Capacity per hour.	Speed per minute Double Stroke.	PRICES. Iron with Brass Valves	PRICES. All Brass.
00	¼ inch	6½ lbs.	6 inches	160 gals.	110	**16/-**	**23/6**
0	½ ,,	11 ,,	7¼ ,,	250 ,,	104	**18/-**	**27/6**
1	¾ ,,	13 ,,	7¾ ,,	390 ,,	100	**20/-**	**30/6**
2	1 ,,	18 ,,	8⅝ ,,	525 ,,	90	**24/-**	**39/6**
3	1¼ ,,	25 ,,	9¼ ,,	660 ,,	85	**29/-**	**55/-**
4	1¼ ,,	31 ,,	10½ ,,	920 ,,	80	**36/-**	**66/-**
5	1½ ,,	39 ,,	11¼ ,,	1,120 ,,	75	**40/-**	**82/6**
6	1½ ,,	46 ,,	13 ,,	1,320 ,,	60	**48/-**	**100/-**
7	2 ,,	70 ,,	14½ ,,	1,700 ,,	60	**58/-**	**132/-**
8	2 ,,	80 ,,	15½ ,,	2,300 ,,	55	**75/-**	**176/-**
9	2½ ,,	110 ,,	15¾ ,,	2,750 ,,	50	**100/-**	**212/-**
10	3 ,,	156 ,,	18¼ ,,	3,150 ,,	45	**135/-**	**286/-**
11	3 ,,	176 ,,	20½ ,,	4,000 ,,	45	**165/-**	**352/-**

The Pumps No. 00 to 6 have oval, No. 7 to 11 round flanges.
The capacities given are calculated upon a vertical suction of 3 feet and a vertical delivery of 3 feet.



THIS DESIGN

can be obtained in the form of a neat counter card on application, and is one of the many we are now using in the Press to increase your sales and bring you customers. Chemists who have not a wine licence are reminded that

WINCARNIS

with Quinine can be sold by them, and trade terms will be sent on request. All, however, should keep a good stock of Wincarnis on hand to meet the ever increasing demand which is now larger than ever.

COLEMAN & CO., LTD.
Wincarnis Works, Norwich.

Contractors to H.M. Forces and R.A. Medical Corps.
Gold Medal Franco-British Exhibition, London, 1908.
By Special Appointment to the King and Queen of Spain.

PURE FOOD CASEIN OF THE . . HIGHEST QUALITY.

For Infants' & Invalids' Foods, Diabetic Bread, Biscuits, &c.

SOLD IN TIN-LINED AND SEALED CASKS OF 1 CWT. EACH, OR PACKED AND LABELLED FOR THE TRADE.

ALSO

MILK, WHEY & EGG POWDER

Guaranteed Pure, and 100 per cent. soluble . . in water of any temperature . .

We Manufacture between 20 and 30 Milk and By-products of Milk for every known use.

MANUFACTURERS;

CASEIN, LTD., CULVERT WORKS, BATTERSEA, **LONDON, S.W.**

Also in FRANCE and UNITED STATES.

True Bermuda Arrowroot

TRADE MARK. E REGISTERED.

is shipped only by W. T. James, Hamilton, Bermuda, who desires to warn buyers against "so-called" Bermuda Arrowroot which is being freely offered and sold in the United Kingdom as genuine Bermuda. Recommended by the Medical Faculty.

For Samples of the Genuine Bermuda Arrowroot apply to

George Harker & Co., Ltd., 101/103 Upper Thames Street, London, E.C.

BLOCK LIQUORICE JUICE

(Guaranteed absolutely pure.

BRANDS

"VB" **"BX"** **"E"**

("E" brand entirely soluble in cold water).

These juices, being **PURE**, bear the highest possible percentage of glycyrrhizin, and are consequently the most economical for all purposes.

EVANS, GRAY & HOOD, 5 GREAT TOWER STREET, LONDON, E.C.

FRENCH HERBS, — CROP 1909. —

MELISSA, CAMOMILES,
: : ROSE LEAVES. : :
IRISH MOSS, OWN FISHERIES.

H. SALLE & CIE., PARIS, 4 RUE ELZEVIR.

LOFTHOUSE & SALTMER, *Wholesale and Export Drug Merchants, Manufacturing Chemists,* HULL,

Offer the Trade the following valuable P.A.T.A. Protected lines, bearing a very large Protected Retail Profit, which sell freely and are well known and valued by the Public in many parts of the Country.

	Protected Retail Price.	Dozen.
LOSALL'S SALT (well advertised), tins ...	6d. ...	3/6 net.
" " " " ...	1/- ...	7 - "
" " " bottles in cartons	1/6 ...	10/6 "
LOSALL'S MILK FOOD, oblong tins 1/- size. Ideal Food for children and adults	8½d. ...	5/6 "
FINEST HYGIENIC FIRST MILK FOOD "Crown Brand," specially adapted for infants from birth to 3 or 4 months, tins 1/3	1/- ...	7/6 "
PREPARED BARLEY ("Crown Brand.") Usual 1/- size, lever lid tins. A good selling line	— ...	4/- net.
MALTED FOOD. Usual 1/- size, lever lid tins. Buyer's name and address printed free on 3 dozens. Special design label, name and address, on gross orders if desired	— ...	4/9 "
LOSALL'S FOOT-ROT OINTMENT, ... enamelled tins	1/- ...	7/6 "

Chemists taking up the above really valuable, large profit-yielding lines, will find them an important adjunct to their business,

London Agents: F. NEWBERY & SONS.

If you want close up-to-date Quotations for superior and approved Counter Specialities, and for Pure Drugs, Chemicals or Pharmaceutical Preparations, don't fail to write to

LOFTHOUSE & SALTMER, *Wholesale Druggists,* HULL

BENGER'S FOOD

For Infants, Invalids, and the Aged.

A DOCTOR'S LETTER.

"I am a thorough believer in the food, and have had many years' experience of its excellence. The other day I was visiting my oldest patient—a gentleman of 95 years of age. He has just recovered from a severe attack of Pneumonia. He told me how little he was in the habit of eating—that he hardly took any butcher's meat and lived on the sparsest of foods; then, as he was speaking, a gleam of light came into his eyes, and he clasped his hands with ecstasy—exclaiming: "Ah! but the best of all my food is dear old Benger, I have taken it for years and I never tire of it, it always suits me and it is my best friend."

The "Lancet" describes it as—"Mr. Benger's admirable preparation."

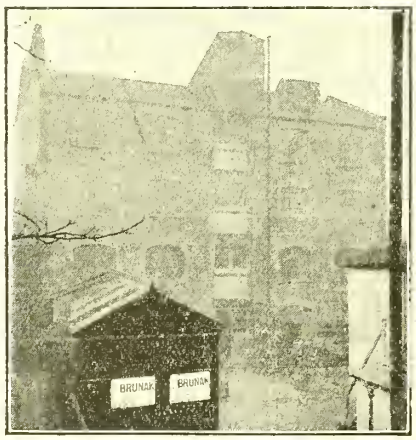
The "British Medical Journal" says: "Benger's Food has *by its excellence* established a reputation of its own."

Benger's Food is Sold in Tins by Chemists, &c., Everywhere.

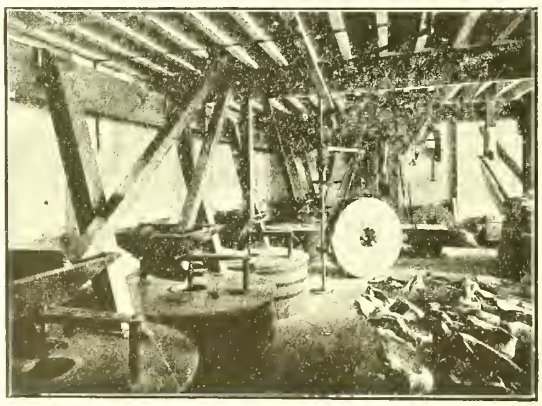
NATURAL ALIMENTATION

(A "C. & D." description of the preparation of Natural Foods & The ALLINSON Whole Meal & Bread.)

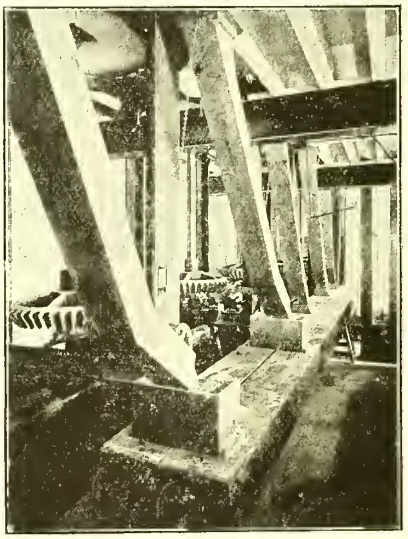
THERE is a marked change coming over the dietary of the people of this country. Until comparatively recent years many—perhaps the majority—ate as if they were carnivorous instead of omnivorous animals, in so far as the cereal and vegetable portion of their diet was by far the lesser part. That condition is changing rapidly, and one of those who deserve credit for participating in the influences which have effected the change is Dr. Allinson, whose food-theories were early appreciated by Mr. Peter Tyrer, a gentleman long connected with the drug-trade. Mr. Tyrer was not content with theorising, but has devoted years to manufacturing the natural foods suggested by Dr. Allinson, so that the food-mills at Bethnal Green, London, E., are a fine representation of modern methods of treating cereals and other food-bases. These mills, as shown above, are the property of the Natural Food Co., Ltd., of which company Mr. Peter Tyrer is the Managing Director, and it was under his guidance that a *C. & D.* representative inspected them and the various stages of food-production. The five-storey building of brick stands back some little distance from Patriot Square. The chief purpose of the mills is the preparation and packing of wholemeal flour and infants' food, with a separate laboratory for the preparation and mixing of vegetable butters and fats. A 60-h.p. suction gas-engine on the ground floor provides power for seven vertical shafts that turn the grinding-stones on the first floor. Mixing-machinery occupies the second floor, and cleaning-machinery the third. Two enormous bins holding the untreated and polished grain occupy the fourth floor, while the grain on arrival is taken to the top floor, whence it takes its devious way downwards. During the process of preparation the food products are not handled; numerous elevators of chains with small buckets carry the material upwards, while spiral worms rotating in closed conduits convey it laterally. Labour is saved by gravitation. There are meal spouts and conveyors which carry flour to the packing-rooms. Filling into bags or tins is done in the packing-room from shoots, and the result is that the atmosphere of the factory is surprisingly free from dust. The woodwork is chiefly varnished pitchpine. The untreated grain is freed first from extraneous dust and admixtures in a cleaning-machine, where discriminating draughts and screens remove the small and broken grains, oats and barley, cockle-seed—



Dr. Allinson's Food-mills.



The Grinding-floor.
In the photograph one of the stones is shown as it is taken up for re-dressing.



Meal Spouts and Conveyors.

about seven different grades of by-products being thus obtained. The polished wheat is taken to the cleaned wheat bin, whence it descends by gravitation to be crushed between the rotating stones. A draught is drawn between the grinding faces to obviate undue heating and consequent spoiling of the flavour. The crushed grain ascends by elevator to the screening-machinery, which removes the particles of correct size, returning the remainder to be recrushed, the highly resistant bran going to a special pair of stones. The whole cycle is repeated until the whole of the grain is a component part of the meal. Worms convey the finished meal of uniformly fine colour and flavour to packing-shoots, where it is filled into bags or sacks containing from 3½ lb. to 1¼ cwt.

The prepared material for making infants' food is ground, then bolted in a screener through fine French silk. It then descends a shoot to the packing-room on the ground floor, where it is packed into paper-lined tins to retail at 1*s.* and

NATURAL ALIMENTATION



A ROOM ON THE PACKING-FLOOR.

2*s.* 6*d.*, the latter containing 4 lb. Here girls were busy packing Brunak, a coffee-substitute, with the flavour, odour, and appearance of coffee, and yet free from coffee. The store occupies a portion of this floor, and the neat and orderly arrangement is a tribute to the store-keeper. Mention has been made of the fats produced. These include walnut-butter, a delicious preparation of nut-fats, with a rich flavour and colour of walnuts. Such preparations as this are much liked by vegetarians. There is also made a pure white vegetable-butter, which is half the price of ordinary butter. Attached to the offices at 205 Cambridge Road, Bethnal Green, a few hundred yards from the mills, is a steam-oven for educational bakery, to show how Allinson wholemeal bread should be made—*i.e.*, without adding chemicals or excessive proportions of yeast, thereby detracting from the natural flavour. Here also is cooked "Power," a rich brown food in granules ready for use and of pleasant taste.

The Allinson Wholemeal Bread is making rapid strides. The medical profession are constantly calling attention to its virtues, many of them living upon it; and samples are willingly sent to any chemist, physician, or dentist upon receipt of post card.

Dr. Allinson's SPECIALITIES.

A LIVING PROFIT ENSURED.

N.B.—The co-operation of Retail Traders is respectfully asked in order that our goods shall not be sold at lower prices than specified hereon; and we have much pleasure in stating that we have already received letters of approval and promises of support in maintaining these prices from the largest Cash Chemists and Drug Stores in town and country.

Dr. ALLINSON says:

"'POWER'

is a splendid food for breakfast or other meals. It is ready cooked. The flavour is delicious, and everyone likes it."

In 1-lb. Packets at **7d.** each; **5/6** per dozen.

Dr. Allinson's BRUNAK.

The New Drink, instead of TEA or COFFEE, is finding a place in every home. It does not cause nervousness, trembling, wakefulness, palpitation, or flushing, as do tea and coffee. It is as refreshing as tea, as tasty as coffee, as comforting as cocoa, and as harmless as water.

½-lb. Packet (**6d.**), **5/-** doz.; 1-lb. Packet (**1 -**), **10/-** doz.

The ALLINSON WHOLEMEAL.

is sold only in sealed bags, 3½ lbs. (**7**d. size), **5 8** per doz.
7 lbs. (**1/2** size), **11 4** per doz.; also larger sizes.
4 doz. 7-lb bags or equivalent carriage paid.

Dr. Allinson's FOOD FOR BABIES.

			EACH	PER DOZ.
6d.	Tins	(minimum retail price, **5½d.**)		**4 6**
1 -	,,	(,, ,, **10½d.**)		**9 -**
2 6	,,	(,, ,, **2 2**)		**21 -**
5 -	,,	(,, ,, **4 4**)		**42/-**

Dr. Allinson's PREPARED BARLEY.

			PER DOZ.
6d.	Tins	... ...	**4 6**
1/-	,,	... ...	**9 -**
2 6	,,	... ...	**21 -**

All Dr. ALLINSON'S Specialities can be obtained through the usual Wholesale Houses, or will be sent direct if you are unable to obtain them.

KINDLY NOTE.—If any of our goods are soiled or out of condition from any cause, we trust you will return them to us at once, as we shall be very pleased to exchange them for you free of all cost for carriage, &c.

We issue a list of Agents' Addresses, and shall be glad to add yours on receipt of a Postcard.

THE NATURAL FOOD CO., LIMITED,

BETHNAL GREEN, LONDON, E.

MENLEY & JAMES, Ltd.

Menley House, 39 Farringdon Road, London, E.C.

are now introducing to the Medical Profession

GLIDINE = =	(A pure Vegetable Protein Food).	Retailing at **2/9** and **5/-** per tin.
IODOGLIDINE	(An organic Compound of Iodine with pure Vegetable Protein.)	Retailing at **3/-** per phial of 20 tablets.
LAXOL = =	(Castor Oil made palatable).	Retailing at **1/1½** per bottle.

Price List will be sent on application.

R. J. FULLWOOD & BLAND'S

Celebrated

"STAG" brand "DAIRY" brand.

ANNATTO & RENNET

40% PROFIT
is made by Retailers on our ESSENCE OF RENNET and JUNKET POWDER. On P.A.T.A. List.

ESTABLISHED



TRADE MARK.

123 YEARS.

A small consignment of ESSENCE OF RENNET, JUNKET POWDER, and JUNKET TABLETS sent Carriage Paid on Sale or Return.

OLEO BUTTER COLORINE. ESSENCE OF RENNET. RENNET POWDER.
JUNKET POWDER. JUNKET TABLETS.

IN BOTTLES AND IN BULK.

Before placing your orders for bulk, please allow us to submit samples and quotations.
We are the largest manufacturers of the above preparations in Great Britain.

SOLE ADDRESS— **STEAM ANNATTO WORKS, HOXTON, LONDON, N.**

MR. CHEMIST.

Has it ever occurred to you that **BUVO** is a line that **you** should stock? You handle tablets of Cascara, Soda Mint, &c. Why not tablets of Consommé?

WHAT IS BUVO?

The CHEMIST AND DRUGGIST, July 10, 1909, says:—

"... It is a novelty, and the manner of introducing it to the trade is novel. BUVO is a soluble tablet composed of Beef Extract and anti-scorbutic vegetables, nicely flavoured, and the beef tea made from it so closely resembles the home-made article that it even has tiny globules of fat floating on the surface. ..."

Awarded Gold Medal and Diploma, London, 1909.



Awarded Grand Prix and Diploma, Paris and Vienna, 1909.

If you have not yet stocked BUVO, try a sample parcel. We will send this carriage paid, and enclose showcards and advertising matter which will sell BUVO for you and bring repeated enquiries.

PROFIT.—On first order we will send you 1 gross free on every 4 gross bought. Price **8/-** per gross. Cash with order, 5% discount. Monthly, net. Almost 100%.

Repeats, **8/-** per gross, same terms. 33⅓% on selling price.

BUVO, Limited,
20 Rosebery Avenue, London, E.C.

A. WANDER, Ph.D.

MANUFACTURING CHEMIST,

1 & 3 Leonard Street, LONDON, E.C.

OVALTINE

ON THE P.A.T.A.

A powerful digestive agent and a nervine tonic of the highest order. Very palatable. Extremely nourishing and acceptable to the most delicate stomach. Invaluable in Exhaustion, Malnutrition, Faulty Digestion, Convalescence, Neurasthenia, Brain Fag, &c.

Highly recommended by the Medical Profession.

In 4½-oz., 9-oz., and 18-oz. tins, retailing at **1/-, 1/9** and **3/-** per tin.

Dry (Crystalline) EXTRACT OF MALT. Pure, or combined with **Iron Iodide, Iron Pyrophosphate, Compound Glycerophosphates, or Calcium Phosphate.**

In bottles retailing at **1/6** and **1/9,** or in bulk in 5-lb. tins.

This excellent preparation is particularly suited for Chemists to make up their own Malted Foods, &c. Prices on application.

FORMITROL PASTILLES (in tubes of 30 Pastilles, or in bulk).

TAMARIND DRAGEES. ANTI-OBESITY TABLETS.

MENTHOL and MENTHOL and COCAINE DRAGEES.

ANTI-FRECKLES OINTMENT (in tubes or 1-lb. jars).

TOURISTS' OINTMENT (in tubes or 1-lb. tins).

ECZEMA OINTMENT (in tubes or 1-lb. tins).

ANTIDYSOTE POWDER, &c., &c.

Customer's Name and Address Printed on any Quantity.

SEND FOR FULL ILLUSTRATED CATALOGUE.

BRAND'S BRITISH PRODUCTIONS

FOR INVALIDS



IN GLASS.



Have upheld their high reputation for

FIFTY YEARS,

and are





RECOMMENDED

BY THE MEDICAL PROFESSION

ALL OVER THE WORLD.



IN TINS.





1893 to 1909

Then—in 1893—"Daisy" was first prepared, on a small scale, behind a retail druggist's counter; and its best friends little dreamt of the marvellous success that it was destined to attain.

But the demand for "Daisy" grew, and grew, and grew; the people would have it, and retailers delighted to sell so popular and profitable a line.

Now—in 1909—"Daisy" has a larger sale than any other headache cure on the market, and there are more retailers selling "Daisy" than ever before. "Daisy" is known wherever the English language is spoken, and it occupies the largest factory of its kind in all the world.

DAISY Ltd., Mammoth Works, LEEDS.

ESTABLISHED 1893. *Telegrams: "DAISY LEEDS."*

TIME PROVES ALL THINGS.

"DAISY" has not yet attained its "Jubilee"; but sixteen years of unparalleled popularity and success prove beyond possibility of doubt that "Daisy" is a safe and reliable cure for Headache, Neuralgia, and all Nerve pains.

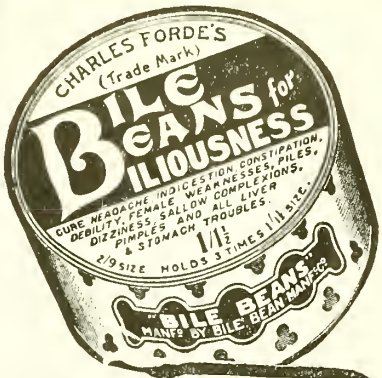
"Daisy" has won the confidence of both the Public and the Trade. The former appreciate it because it does just what we say it will do, and the latter appreciate it because it makes satisfied customers who come again, and because it shows a liberal margin of profit.

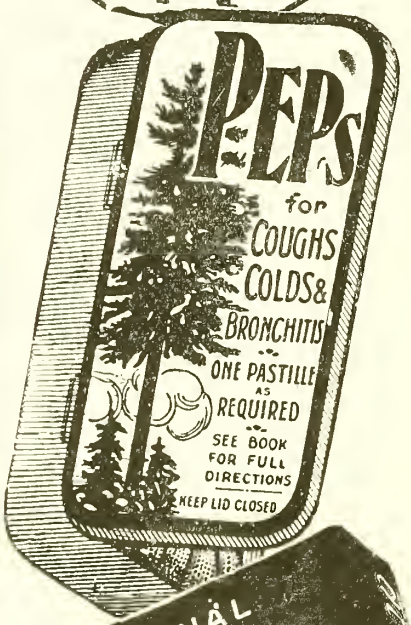
Send for Price List and particulars of our Window Displays.

DAISY, Ltd., Mammoth Works, LEEDS.

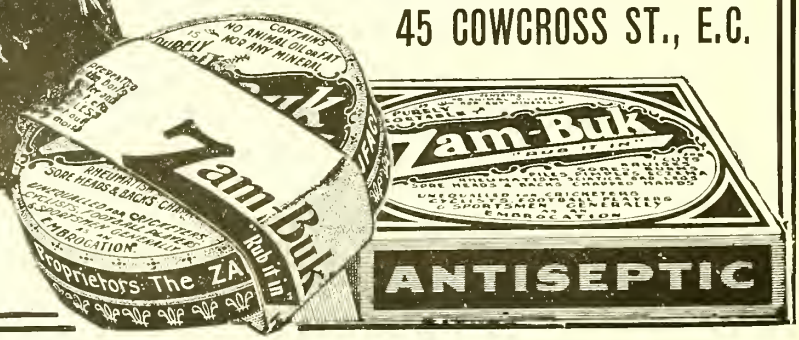
ESTABLISHED 1893. *Telegrams: "DAISY LEEDS."*

THE WORLD'S GREATEST PROPRIETARIES









ALWAYS ADVERTISED. ALWAYS SELLING.

The enormous, bold and effective advertising of these four lines creates and maintains regular and gigantic sales.

In every British newspaper or magazine of importance, Home and Colonial, and by pamphlet postal work and elaborate showcards, the Fulford specialities are regularly and constantly advertised.

This means that wherever the English language is spoken the names of our lines are household words.

In Great Britain and throughout the Empire the sales are always increasing, and in millions of homes our goods have become part and parcel of the household economy. People are always asking for them, so they are never dead stock to the Chemist or Druggist.

SPECIAL NOTE FOR COLONIAL DRUGGISTS.— We shall be happy to answer all enquiries about our lines direct from Greek Street, Leeds, England.

Chemists in any of the following Colonies should apply to their own branch depot:—

AUSTRALIA—39 Pitt Street, Sydney; King William Street, Adelaide; Flinders Street, Melbourne; Charlotte Street, Brisbane; Wellington Street, Perth. Launceston, TASMANIA. Dunedin and Auckland, NEW ZEALAND. 9 Long Street, Cape Town, SOUTH AFRICA. 58 Colborne Street, Toronto, CANADA. 9 Dalhousie Square, Calcutta, INDIA.

Write for full particulars and prices to

C. E. FULFORD, LTD.

(Sales Dept.) 15 & 16 GREEK ST., LEEDS.

LONDON ADDRESS:

45 COWCROSS ST., E.C.

PERMANGANATE OF POTASH CRYSTALS ARE POISONOUS

AS HAS BEEN PROVED AT NUMEROUS CORONERS' INQUESTS.

CONDY'S FLUID and CONDY'S CRYSTALS

ARE GUARANTEED
TO CONTAIN

NO PERMANGANATE OF POTASH.

29 Injunctions, with damages and costs, have been obtained against Chemists selling a solution of Permanganate of Potash in execution of orders for CONDY'S FLUID.

CONDY & MITCHELL,

LIMITED,

Proprietors of Condy's Fluid and Condy's Crystals,

Condy's Fluid Works, Goswell Road, London, E.C.

BAYER'S

ASPIRIN. Registered Trade Mark.

BAYER'S SPECIALITIES

are obtainable for re-sale in Original Packing only.

VERONAL. An Excellent Hypnotic.

BEWARE OF IMITATIONS.

ALYPIN. Local anæsthetic.	**CORYFIN.** Menthol derivative	**HELMITOL.** Urinary antiseptic.	**JOTHION.** External iodine preparation.	**SABROMIN.** Improved bromine preparation.	**TANNIGEN.** Anti-diarrhœic.
ARISTOCHIN. Tasteless quinine preparation.	**CREOSOTAL-BAYER.**	**HEROIN HYDR.** Substitute for morphia.	**MESOTAN.** External anti-rheumatic.	**SAJODIN.** Tasteless internal iodine preparation.	**THEOCIN-SOD. ACET.** Powerful diuretic.
ARISTOL. Cicatrisant.	**DUOTAL-BAYER.**	**IODOTHYRINE.** The active principle of the thyroid gland.	**NOVASPIRIN.** Specific in influenza.	**SALOPHEN.** Mild anti-rheumatic.	**TRIONAL-BAYER.**
CITARIN. Anti-arthritic.	**GUAIACOSE.** Lung tonic.	**IRON SOMATOSE.** Excellent tonic for anæmia, chlorosis, &c.	**PROTARGOL.** Organic silver preparation.	**SOMATOSE.** Ideal restorative.	**VERONAL-SODIUM.** Soluble hypnotic.

SALICYLATES, PIPERAZINE, THEOBROMINE AND SALTS.

Agurin, Europhen, Iodothyrine, Iron Somatose, Isopral, Lycetol, Milk Somatose, Salol-Bayer, Saloquinine, Salicylate of Saloquinine, Sulfonal-Bayer and Trional-Bayer.

SULFONAL-BAYER. Original product, no more expensive than other makes.

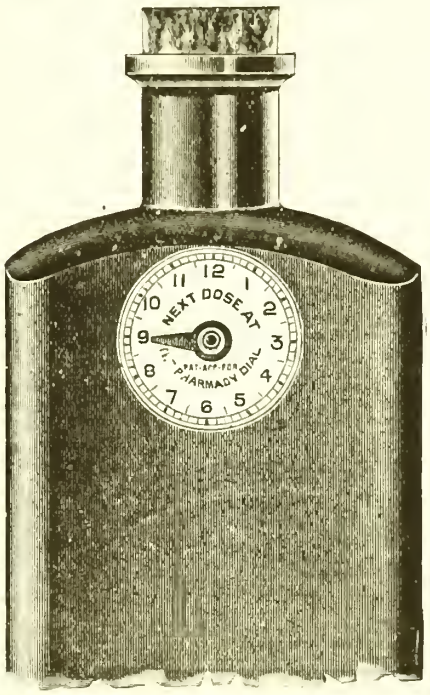
PHENACETINE-BAYER. Original product, no more expensive than other makes.

THE **BAYER CO.** Ltd.
19 St. Dunstan's Hill, LONDON, E.C.

PRODUCTS.

UP-TO-DATE PHARMACIES

4/- per gross
DIALS.



4/- per gross
DIALS.

PATENT APPLIED FOR.

USE THE
Pharmacy Dial.

Indispensable in every Sick Room.

THE PHARMACY DIAL IS NOW STOCKED BY
S. MAW, SON AND SONS, Aldersgate Street, E.C.
MAY, ROBERTS & Co., Ltd., Clerkenwell Road, E.C.
AND OTHER
WHOLESALE HOUSES.

SOLE AGENT:

R. J. REUTER, 5, 6, & 7 Denman Street, —PICCADILLY CIRCUS,— LONDON, W.

Messrs. F. KEMP & CO.

(LIMITED)

95 York St., SYDNEY, AUSTRALIA,

DESIRE to intimate to the **DRUG** and **DRUGGISTS' SUNDRIES TRADE** that their Australasian representative, Mr. G. M. Campbell, will arrive in London by the R.M.S. *Macedonia* on August 12th, 1909, and will be prepared to interview any wholesale or manufacturing firms who desire to be represented in Australasia with the Chemists' and Druggists' Trade **DIRECT.**

Full particulars as to references can be obtained in London, and all interviews with regard to Australasian trade can be arranged by writing to Mr. Campbell direct while in London,

c/o The Offices of

"THE CHEMIST AND DRUGGIST,"

42 CANNON STREET, LONDON.

LISTERINE

The Popular American Antiseptic.

A non-toxic antiseptic of known and definite power; prepared in a form convenient for immediate use; of ready dilution, sightly, pleasant, and sufficiently powerful for all purposes of asepsis—these are advantages which Listerine embodies.

The success of Listerine is based upon merit, and the best advertisement of Listerine is—Listerine.

LISTERINE DERMATIC SOAP

Designed to meet the most exacting requirements of a saponaceous detergent for use in the antiseptic treatment of diseases of the skin. No animal fats, and only the best vegetable oils enter into its composition, and of these it contains a surplus, "superfatted." It is a bland, unirritating and remarkably efficient soap.

LISTERINE TOOTH POWDER

This powder is not intended to supplant Listerine in the daily toilet of the teeth, but is offered in response to the demand for a frictionary dentifrice to be used in conjunction with this well-known and time-tried antiseptic.

Listerine Tooth Powder, like Listerine, will advertise itself by its intrinsic merit.

BRITISH TRADE SUPPLIED BY

S. MAW N & SONS, 7 to 12 Aldersgate St., London, E.C.

General Agents for Great Britain.

FOR DESCRIPTIVE LITERATURE, ADDRESS—

LAMBERT PHARMACAL CO., St. Louis, U.S.A.

On the P.A.T.A. List.

FRAME-FOOD

PREPARATIONS.

(Frame-Food, Racia Food (F.F. No. 1), Frame-Food Jelly and Cocoa.)

TRADE PRICE LOWERED IN MAIN LINES

FRAME-FOOD and FRAME-FOOD COCOA, the Retail Prices remaining the same.

New Lines: "FAMILY" TINS.

NO STOCK! NO RISK! GOOD PROFIT!

Best Terms allowed on £2 Orders which are C.P.

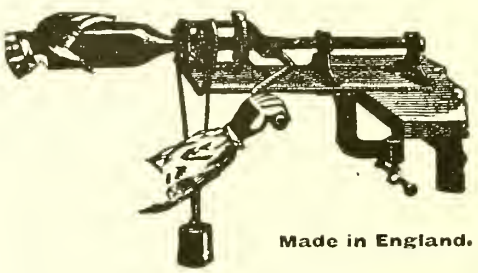
ADVERTISING MATTER FREE.

Write for Particulars—

FRAME-FOOD CO., LTD.

SOUTHFIELDS, LONDON, S.W.

NEW CAPSULING MACHINE.



Made in England.

The only Machine which leaves no crease or pleat on the Capsule.

Can be fixed to any Counter. A single pull of the lever is sufficient to fix the Capsule.

Patentees : C. MELIN & CO.

37 Crutched Friars, LONDON.

Reitmeyer & Co.

Modern Therapeutics.

Antiarthrin.

Most effective in cases of Gout, Rheumatism, Stone, Gravel (Uric Acid Diathesis), &c., &c.

Antisclerosin.

Prophylactic par excellence } **in Arteriosclerosis.**

Anusol-Suppositories & Ointment.

Specific in Hæmorrhoids and other painful rectal conditions.

Arhovin.

The only substitute for Sandal Oil and Balsamics.
Urinary Disinfectant and Bactericide. For the internal and external treatment of Gonorrhœa (acute and chronic), Cystitis, Fluor Albus, Uric Acid Diathesis.

Cascoferrin.

(1·5% Triferrin and aromatic Ext. Cascara.) Pleasant taste. Prompt action. } A new *iron preparation*, stimulating intestinal activity, indicated in *Chlorosis*, Anæmia, Convalescence, &c.

Castoreum Bromide.

(Sal. bromat. effervesc. c. Valeriano et Castoreo.) } Highly recommended in the treatment of all forms of Neurosis of the Circulatory and Central Nervous System, especially Hysteria, Chorea, Neurasthenia, Pertussis, &c.

Catheterpurin.

An Ideal Aseptic Lubricant for Catheters, &c.

According to Professor L. Casper, of Berlin University.

Diabeteserin in Diabetes.

Haematopan.

Readily Soluble, completely digestible. } A natural concentrated food, possessing all the constituents of Hæmatogen in dry powder form, and containing Extract of Malt. Well borne even by the weakest stomach.

Muiracithin.

Most Effective in cases of IMPOTENCE and all Neurasthenic conditions. } Stimulates the Spinal Cord, strengthens the Heart, and forms an excellent Nerve Tonic.

Pneumococcine.

Indicated in Pneumonia, Bronchial Pneumonia, Pulmonary Congestion, Pleurisy, Tuberculous Meningitis, Chronic Bronchitis, and Tuberculosis in the Early Stage.
Valuable in Colds, Slight Attacks of Bronchitis and Influenza.

Probilin-Pills.

Biliary Disinfectant and Cholagogue, indicated in Cholangitis, Cholecystitis and Cholelithiasis.

Pyrenol.

Antipyretic, Expectorant, Antirheumatic. Indicated in Asthma, Bronchitis, Pertussis, Pneumonia, Influenza, Rheumatism, Neuralgia.

Xerosin.

An antiseptic drying paste, of the colour of the skin. Easily removed by water only. Valuable in the treatment of Eczema (all forms), even old cases, red and frozen skin, &c.

Full Literature from the Sole Consignees for Great Britain and Colonies:

Reitmeyer & Co.

63 Crutched Friars, London, E.C.

To cultivate a range of really satisfied custom is the aim of every retail pharmacist.

THIS can be done with heavy gain in actual profits by handling Euthymol Toilet Preparations.

THE co-operation of all who are interested in our local sales plan is very cordially invited.

EACH day brings increased opportunities for selling these goods which have already won their way to recognition by millions of people of the better class.

PARKE, DAVIS & CO., Beak Street, LONDON, W.

Even with goods of approved quality and of undoubted merit, there is always the question of protected profit.

IN all branches of retail trade, working expenses are an ever-growing charge upon resources. Unless revenue is, as far as possible, made up from goods that sell freely and at a substantial margin over cost, retail trading is likely to prove disappointing in the extreme. We have abundant evidence that our firm policy of securing always a large protected profit is well appreciated by thinking retailers in every country of the world.

PARKE, DAVIS & CO., Beak Street, LONDON, W.

OPPENHEIMER, SON & CO., LTD.

find that by placing

"ROBOLEINE"

on the **P.A.T.A.**

CHEMISTS place it in a prominent position and thus secure a ready sale.

O. S. & Co's. business is exclusively with Chemists, wholesale and retail.

¶ Co-operate in increasing sales.

¶ Have a scientific nutriment which will regain trade in invalid food preparations now mostly done by grocers and oilmen.

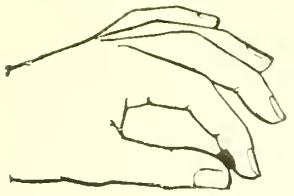
¶ Receive benefit both in profits and reputation.

¶ The most effective substitute for Cod Liver Oil they can suggest.

FREE SAMPLES. Purchasers of 3 or 6 dozen at minimum wholesale prices will receive an equal number of opal jars (4 oz.) as samples for free distribution amongst their customers.

P.A.T.A. PRICES.	Minimum Retail.		Minimum Wholesale.	
	Each - -	2/9	Per doz.	**26/5**
		5/-		**48/-**

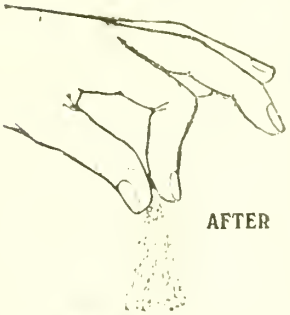
179 Queen Victoria St. LONDON.



BEFORE

MAY BE CRUSHED TO POWDER
BETWEEN THUMB AND FINGER.

(PATENT)



AFTER

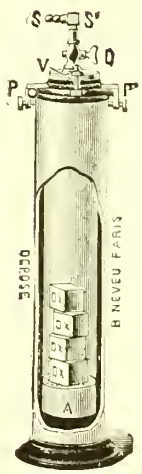
"PULVERETTE"

POWDER PILLS.

YOU NEED THE BEST TO MEET COMPETITION.

PULVERETTES are vastly superior to pills or compressed tablets. The process of manufacture is simple and quick ; drugs do not oxidise or deteriorate during manipulation. Thousands of private formulæ are now being made into Pulverettes. Send for samples and quotations for your own formulæ. Satisfaction and secrecy guaranteed.

AUTOMATIC OXYGEN GENERATOR



Used by the French Military and Naval Authorities and in French and Continental Hospitals. Entirely supersedes cylinders of compressed Oxygen ; can be manipulated by the most inexperienced. The Oxygen is chemically produced by the action of water on cubes of Oxylithe placed in the inner cylinder. Produces up to 100 litres of gas without recharging. The Oxygen is 99·9 per cent. pure, and may easily be warmed, medicated, or perfumed.

The production of Oxygen stops automatically when not in use.

The cubes of Oxylithe keep indefinitely if kept dry, and are always ready for instant use.

OPPENHEIMER, SON & CO., LTD.

179 QUEEN VICTORIA ST., LONDON, E.C.

FAIRCHILD BROS. & FOSTER

TRADE MARK 'PEPULE' BRAND OF

DIGESTIVE PRODUCTS.

'PEPULE' PEPSIN 1 gr.
In bottles containing 25 at 6/- and 100 at 17/- per doz.; 500 at 6/5 each.

'PEPULE' PEPSIN 3 grs.
In bottles containing 25 at 11/- and 100 at 29/- per doz.; 500 at 10/8 each.

'PEPULE' ZYMINE 3 grs.
In bottles containing 25 at 13/- and 100 at 39/- per doz.; 500 at 14/6 each.

'PEPULE' ZYMINE COMPOUND.
Each contains 'Zymine' 2 grs., Bismuth Subnitrate 3 grs., Powdered Ipecac. 1/10 gr.
In bottles containing 25 at 13/- and 100 at 39/- per doz.; 500 at 14/6 each.

'PEPULE' PEPSIN AND ZYMINE.
Each contains Pepsin 2 grs., 'Zymine' 3 grs.
In bottles containing 25 at 20/- and 100 at 58/- per doz.

'PEPULE' PEPSIN, BISMUTH AND ZYMINE.
Each contains Pepsin 1½ grs., Bismuth Subnitrate 2 grs., 'Zymine' 1½ grs.
In bottles containing 25 at 13/- and 100 at 39/- per doz.

'PEPULE' PEPSIN, BISMUTH AND NUX VOMICA.
Each contains Pepsin 3 grs., Bismuth Subnitrate 2 grs., Extract Nux Vomica 1/6 gr.
In bottles containing 25 at 13/- and 100 at 39/- per doz.

'PEPULE' OX GALL COMPOUND.
Each contains Ox Gall 2 grs., 'Zymine' 2 grs., Extract Nux Vomica 1/8 gr.
In bottles containing 25 at 13/- and 100 at 39/- per doz.

'PEPULE' PANCRO-HEPATIC.
Each contains 'Zymine' 3 grs., Ox Gall 1 gr.
In bottles containing 50 at 22/- per doz.

'PEPULE' SECRETION 1 gr.
In bottles containing 100 at 58/- per doz.

London Prices subject to B. W. & Co.'s terms.

Originated and Manufactured by
Fairchild Bros. & Foster,
NEW YORK.

Agents for Europe, Asia, Africa, & Australasia:
Burroughs Wellcome & Co.
LONDON, SYDNEY, CAPE TOWN.

FAIRCHILD BROS. & FOSTER

PRICE LIST.

DIAZYME, a palatable and efficient liquid animal diastase.
In 4 oz. and 8 oz. bottles at 22/- and 40/- per doz.

'ENZYMOL,' a physiological solvent, antiseptic and deodoriser for surgical cases.
In 4 oz. bottles at 26/- per doz.

GLYCERINUM PEPTICUM.
In 4 oz. and 16 oz. bottles at 24/- and 77/- per doz.

'HOLADIN,' an extract of the entire Pancreas Gland, presenting all the constituents both of the digestive and internal secretions.
In bottles containing 25 capsules, gr. 3, at 13/- per doz.
100 ,, ,, 3, 39/- ,,

'HOLADIN' & BILE SALTS.
Each contains 'Holadin' 2½ grs.; Bile Salts ½ gr.
In bottles containing 100 capsules at 58 - per doz.

LACTIC BACILLARY TABLETS.
In boxes of 5 tubes, 10 tablets in each, at 39/- per doz. boxes.

LECITHIN—Fairchild, Pure Isolated Lecithin in a sterile agreeable solution.
In 8 oz. bottles at 58/- per doz.

'PANOPEPTON' a complete and sustaining food, and food stimulant.
In 6 oz. and 12 oz. bottles at 27/- and 46/- per doz.

'PEPSENCIA' a palatable and efficient digestive essence.
In 4 oz. and 8 oz. bottles at 22/- and 40/- per doz., and Winchester quarts at 25/- each.

PEPSIN IN SCALES and POWDER.
In bottles containing ¼ oz. and 1 oz. at 13/- and 32/- per doz.
4 oz. at 7/6, 8 oz. at 13/- and lb. at 24/- each.

PEPTOGENIC MILK POWDER, for the preparation of Modified Milk for infant feeding.
In bottles at 22/- and 44/- per doz.

'TRYPSALIN' (Surgical Solvent).
In powder form for external use only; particularly useful in the treatment of the nose and throat.
1 oz. bottles at 58/- per doz.

'ZYMINE' *In ¼ oz. and 1 oz. bottles at 13/- and 39/- per doz.*

'ZYMINE' PEPTONISING TUBES, for the preparation of Peptonised Milk and other predigested food for the sick.
In boxes of 1 doz. tubes at 15/- per doz. boxes.

London Prices subject to B. W. & Co.'s terms.

Originated and Manufactured by
Fairchild Bros. & Foster,
NEW YORK.

Agents for Europe, Asia, Africa, & Australasia:
Burroughs Wellcome & Co.
LONDON, SYDNEY, CAPE TOWN.

One of many letters received

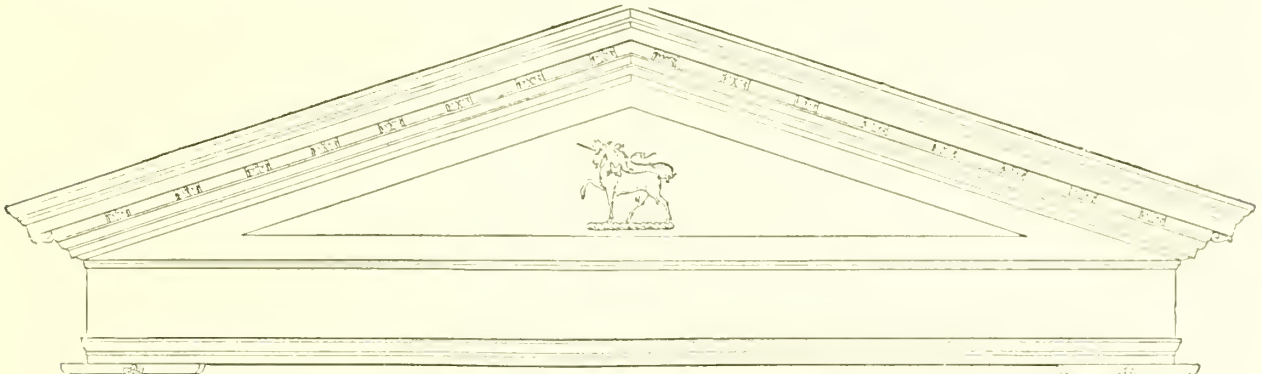
May 11. 09.

Dear Sirs

We feel that a word of praise is merited by you for your exceeding promptness and attention to orders and we express it here right heartily. So long as you continue to charge lowest prices and handle our orders in the most exemplary way in which you treat them at present so will our business with you increase.

Send business card for our Carriage Paid terms and 1909 Catalogue of very low prices. Free packages with carriage paid orders.

Sangers 258 Euston Rd., London, N.W.



TRADE MARK **'WELLCOME'** BRAND

PHYSIOLOGICALLY STANDARDISED

B.P. TINCTURES

The methods adopted for the standardisation of these preparations are based on results obtained in the Wellcome Physiological Research Laboratories and elsewhere, and are those which, in the light of present knowledge, are best calculated to produce uniform and reliable results.

'WELLCOME' Brand
„ CANNABIS INDICA, B.P., TINCTURE OF,
„ DIGITALIS, B.P. „ „
„ SQUILL, B.P. „ „

These preparations are made strictly according to the official method

FOR PARTICULARS AND PRICES SEE WELLCOME CHEMICALS LIST

BURROUGHS WELLCOME & CO.
LONDON (ENG.)

Branches: NEW YORK MONTREAL SYDNEY CAPE TOWN SHANGHAI

G 283

COPYRIGHT

TRADE MARK **'TABLOID'** BRAND

LAXATIVE FRUIT PASTILLES

FINE PHARMACEUTICAL PRODUCTS

'Tabloid' Laxative Fruit Pastilles are prepared under the most desirable conditions from ingredients of exceptional purity.



Reduced Facsimile

They meet the demand for a mild but efficient laxative in a palatable form, suitable for children and delicate persons.

They are attractive and profitable, and in every way in line with other products bearing the 'Tabloid' Brand.

Issued in aluminium and blue metal boxes, in two sizes, suitable for the pocket, at 12/0 and 24/0 per dozen boxes.

BURROUGHS WELLCOME & CO.
LONDON (ENG.)
Branches: NEW YORK MONTREAL SYDNEY CAPE TOWN SHANGHAI
G 287
COPYRIGHT

TRADE MARK **'VAPOROLE'** BRAND

AROMATIC AMMONIA

FOR USE AS

"SMELLING SALTS"

Each dainty product as deliciously pungent as a freshly-opened bottle of smelling salts.

The most portable form of smelling salts ever introduced, a box of 12 being sufficiently compact for purse or pocket.



Showing 'Vaporole' Aromatic Ammonia in use

Issued in aluminised tins of 12 products, at 18/0 per dozen tins. Attractive show-cards to carry 6 boxes, sent post free on request.

BURROUGHS WELLCOME & CO.
LONDON (ENG.)

Branches: NEW YORK MONTREAL SYDNEY CAPE TOWN SHANGHAI

G 288

COPYRIGHT

CHANGE OF ADDRESS

August 3rd, 1909.

On and after Tuesday, August 3rd, 1909,

all communications intended for the

Davy Hill & Hodgkinsons

Branch of the B.D.H. should be addressed to the Company's new works,

Nos. 22, 24, 26, 28 and 30

GRAHAM STREET, CITY ROAD, N.

Telephone: 6123 LONDON WALL (5 lines).

THE BRITISH DRUG HOUSES LTD.

BARRON, HARVEYS & CO., Giltspur Street, E.C.
DAVY HILL & HODGKINSONS, Graham Street, City Road, N.
HEARON, SQUIRE & FRANCIS, Southwark Street, S.E.

THE CHEMIST & DRUGGIST

Jubilee Number & Summer Issue

VOL. LXXV. NO. 5. (SERIAL NO. 1540.)

JULY 31, 1909.

42, CANNON ST., LONDON, E.C.

1859—1909.

THIS Number is an unusual departure in form from Special Issues generally, and a few paragraphs of explanation are necessary.

We take advantage of our annual Summer Issue in this our Jubilee Year to print a few chapters relating to the History of THE CHEMIST AND DRUGGIST, which fifty years ago this month was merely an idea. How the idea took practical shape in the first issue of THE CHEMIST AND DRUGGIST, on September 15, 1859, forms the first chapter of the "History," and in succeeding chapters we present some account of the men who have been workers in the making of THE CHEMIST AND DRUGGIST, and in a graphic rather than detailed manner show the stages in its evolution from the first number to the present one.

As a Jubilee Souvenir a replica of No. 1 is inserted in each copy of this Jubilee Number. This replica is interesting in itself, and by contrast brings into relief the progress which has been made.

The exigencies of hebdomadal publication brook no delay in reporting the living present. While this page passes under the cylinder of the printing machine the British Pharmaceutical Conference is in session in its birthplace—Newcastle-on-Tyne. A section in this issue relates what the forty-sixth Conference meeting has done for the advancement of pharmacy. As far as the exigencies of rapid press-work permit, this Jubilee Number reflects other elements pertaining to Pharmacy and the Chemical and Drug Trades.

We desire to acknowledge our indebtedness to those who by their advertisements make this number profit-making to subscribers. We may devise, but they accomplish—which is especially true of the series of beautiful and businesslike supplements that are inserted as insets. They, and an exceptionally able series of announcements, are a measure of present-day enterprise in the British drug-trade, which buyers will appreciate.

For Contents see page 167.

Jubilee of "The Chemist and Druggist."

Chapters in Our History.

Many who promise their support stand aloof watching our *début*, which, of course, renders that *début* all the more difficult, and has, in fact, prevented our fully realising our intentions.

THERE is a confident ring about the first editorial article printed in the first number of The Chemist and Druggist, from which the above is quoted.

The dome of St. Paul's may have caught the writer's eye; he was probably within a stone's throw of it at the time, and the quotation of Sir Christopher Wren's far-famed epitaph seems to have crystallised the thought of the moment, giving the writer a start, and all his successors a policy—"Si monumentum requiris circumspice."

The replica of our first number, which we present to-day as a souvenir of our Jubilee year, is conceivably a miniature of what The Chemist and Druggist has grown to in the matter of ideas. The intentions not realised in the first issue were never lost sight of, and as the months passed the development of initial ideas and intentions has given "Our Journal" a length of years not hitherto attained by an independent journal of pharmacy in the United Kingdom. The Chemist and Druggist has succeeded where others before it, and since, have failed.

Looking back on the nineteenth century, we find that the first journal connected with pharmacy published in this country was "The Chemist," two volumes of which were issued serially in 1824 and 1825; then it died. A journal with the same title, edited by Charles and John Watt, and published by Alexander Watt, 310 Strand, London, was started in 1839, and continued until 1858. Its sub-title was:

REPORTER OF CHEMICAL DISCOVERIES
AND IMPROVEMENTS
AND
PROTECTOR OF THE RIGHTS OF THE
CHEMIST AND CHEMICAL
MANUFACTURER.

It will be noted that the second query on p. 12 of our first number asks for "the first and last copies of 'The Chemist,' a publication extinct a few months since." The brothers Watt in their preface to Vol. IV. (1843) had something to say about the journals of their time. It was this:

> Within the last twelve months our success has led to the establishment of two other journals, one of which existed for a few weeks, and then became extinct; the second, started with the professed object of "upsetting The Chemist," under the auspices of parties who are personally inimical to us, has failed in attaining the end for which it was established. We have stood uninjured by, and will ever deride the efforts of the malignant endeavours of the enemies our success has arrayed against us, fully expecting that they will fail as signally in their struggle to maintain their own position as they have done in their attempts to eject us from ours.

The first journal here so sarcastically referred to was "The Annals of Chymistry and Practical Pharmacy," which started in 1842 and ceased the next year. The second was "The Pharmaceutical Journal and Transactions," edited and owned by Mr. Jacob Bell, the first number of which was published in June 1841. Eighteen years later Mr. Bell presented the copyright of his journal to the Pharmaceutical Society of Great Britain. It was a strange irony of fate that "The Chemist" had become extinct a few months before. "The Pharmaceutical Times: a journal of chemistry applied to the arts, and manufactures," was a large quarto publication commenced in 1846, which lived only through three annual volumes, well edited though it was. The same fateful number of volumes were published of another brilliant rival of Mr. Bell's journal, the

ANNALS OF PHARMACY
AND
PRACTICAL CHEMISTRY;
A Monthly Record
OF
BRITISH AND FOREIGN MATERIA MEDICA,
PHARMACY
AND
CHEMISTRY, THEORETICAL AND
TECHNICAL.
EDITED BY
WILLIAM BASTICK AND WILLIAM DICKINSON
Members of the Pharmaceutical Society.

This was published in 1852-54, and was one of the most notable of the journals which have been connected with our calling. A man of Bell's ability could not go through life without opponents as well as friends. Dickinson was one of his most unrelenting opponents, and Bastick a clever, educated, and learned pharmaceutical chemist, who had some contempt for the scientific "matter" which appeared in Mr. Bell's journal. This is neither the time nor place to refer in detail to the struggle then going on in British pharmacy. It was exciting while it lasted. The three volumes of the "Annals" contain the unofficial record of it, and are a contribution to the periodical literature of the 'fifties which those who have should keep. Besides these journals of pharmacy a few periodicals embraced our craft in their pages. Thus from 1842 to 1859 (when it was merged into the "Chemical News," since 1860 edited by Sir William Crookes) the "Chemical Gazette" dealt *inter alia* with the applications of chemistry to pharmacy, and some medical papers, such as the "Medical Gazette," apportioned space to pharmacy. Of foreign journals, our venerable French contemporary, "Journal de Pharmacie et de Chemie," had already been in existence fifty years (from 1809 to 1814 as the "Bulletin de Pharmacie") when the first number of The Chemist and Druggist appeared: it was founded in 1809, with Parmentier, C. L. Cadet, L. A. Planche, P. F. G. Boullay, J. P. Bondet, P. R.-Destouches, J. J. Virey, and J. Pelletier as editors. It is still published as the organ of the Paris Society of Pharmacy. The honour of founding the oldest journal of pharmacy printed in the English language belongs to the Philadelphia College of Pharmacy, whose "American Journal of Pharmacy" has been published continuously since 1825. Of independent journals of our class (we refer to those which do not rely for their support on societies or on subsidies) "The Druggists' Circular," of New York, is the oldest, having been founded in 1857; but it has not remained continuously under the same proprietorship, while The Chemist and Druggist has—which is a unique circumstance in British pharmaceutical journalism.

The originators of this journal gave little thought to the fact that numerous ventures on similar lines as theirs had failed; the main idea with them was to produce something "simply useful—a *trade* journal." That was what had not been attempted in pharmacy before. It was Mr. Septimus Vaughan Morgan who conceived the idea and worked

out the details. He has never lost touch with "Our Journal" from that Saturday afternoon in July 1859, when for the first time he jotted down the title

The
Chemist and Druggist:
A MONTHLY TRADE CIRCULAR

until the present; for although we rarely see him at 42 Cannon Street, we know that he is interested in our work. Mr. Morgan is one of six brothers who were together in partnership as merchants in the City of London. They were natives of Glasbury, Breconshire, and while they were still young their father died, leaving a large family. Mr. Septimus Vaughan Morgan and his older brother, Sir Walter Vaughan Morgan, Bart., were educated at Christ's Hospital, Newgate Street, which the older one left on Easter Tuesday 1846, to learn banking. About a year later Mr. Septimus was apprenticed to a general medical practitioner in the country. This apprenticeship over, he proposed to come up to London to "walk the hospitals," when a suggestion was made to him by a still older brother, Mr. William Vaughan Morgan (subsequently better known as Major Vaughan Morgan), to join him in business, where there was "plenty of work and little money," and he did not object. This business that Mr. William Vaughan Morgan had was an old one, which at the time he acquired it, in the early 'fifties, was carried on as Halse & Son, merchants, druggists' sundriesmen, and hardware factors. Mr. Edward Halse was an old friend of the Vaughan Morgan family, and he frequently saw Mr. Morgan, who was then in the wholesale lace and fancy-silk trade in the City. When Mr. Halse wanted to retire he offered the business to Mr. Morgan, and after some consideration he bought it, taking as a partner a Mr. Rees, who brought capital into the concern. It was carried on in Jewin Street as Morgan & Rees, and made good progress before Mr. Septimus Vaughan Morgan was asked to step in. A few months sufficed to convince Mr. Septimus that there was a future for him in it, especially as Mr. Rees wanted to retire. He then became a partner, and the firm-name was changed to Morgan Brothers. The next to join the firm was Mr. Thomas Vaughan Morgan, the oldest of the brothers; then came Mr. Walter from his position as cashier in a bank in Manchester; next Mr. Octavius Vaughan Morgan, who also got his business training in a bank; and finally Mr. Edward Vaughan Morgan, who had been with a firm of paper-stainers in Birmingham. With a bundle of faggots as their trade-mark, these young men, each of them having his own department, developed the Halse business and added others to it, thus increasing the "hard work" which Mr. William Vaughan Morgan held out as the attraction to his brothers.



MORGAN BROTHERS IN 1873.

(From a photograph taken at Beaufort Lodge, Chelsea.)

The names, from left to right, are (*standing*) Septimus Vaughan Morgan, Edward Vaughan Morgan, Octavius Vaughan Morgan; (*sitting*) Walter Vaughan Morgan, William Vaughan Morgan, Thomas Vaughan Morgan.

In May 1859 they, as hardware factors, issued a price-list, embracing some pages of literary matter, with the separate title *The Metal Trades' Advertiser*. It caught on at once, there being nothing else of the kind then connected

with the ironmongery trade, and after the first two monthly numbers had been published the firm found that they had added another department—trade journalism—to their business, which was rapidly growing at home and abroad. They had also acquired at Battersea a crucible factory which was destined to become of even greater importance than their hardware and druggists' sundries trade. Desiring to learn at first hand more about the inauguration of the *C. & D.*, we sought an interview with Mr. Septimus Vaughan Morgan, whom we are accustomed in Cannon Street to regard as the authority on this subject.

An Interview.

"The Chemist and Druggist was the outcome of the Saturday half-holiday movement."

This was Mr. Morgan's rather surprising start to the interview. It was difficult for the interviewer to realise that his host has seen fifty years pass since the time that is recalled, for he is still intellectually alert, firm of foot, vivacious in manner, and facile in speech.

"Yes, the outcome of the Saturday afternoon off," Mr. Morgan repeated—"not for me, but for the staff. The movement began some fifty years ago, and Morgan Brothers were among the first to fall in with it. I stayed behind one of those Saturdays to clear some things off. We were to remove by-and-by. I remember, as the afternoon went on and I got through my work, I lighted a cigar, and began to think of the hit we had made with the 'Metal Trades' Advertiser,' which we had brought out in May, you know, as a literary supplement to our hardware price-list, and it had caught on at once. Customers round Birmingham immediately advertised situations in it, and assistants used it to get berths—there were dozens of ways in which we found it to be useful to those who read it. It was doing Morgan Brothers' business good too," he reflected, "and that set me musing: Why should we not bring out a journal for chemists and druggists as well? The more I thought of it, the surer I felt that somebody would bring out a trade journal of the kind I had in my mind, so I jotted down some notes of my thoughts, and these were the beginning of the *C. & D.*"

"And had you the title 'The Chemist and Druggist' in your mind?" we asked.

"I think so," Mr. Morgan replied; "what it should be called was not a problem. I felt that a trade journal for chemists and druggists should be called 'The Chemist and Druggist,' and that the surest way of our securing the title was to start the paper. I spoke about it to my brother William on the Monday. He was enthusiastic, and the others agreed. So—there you are."

"Of course you supplied the inside knowledge for the paper; how did it happen that the Major was the first editor?"

"Well, he had not so much to do as the rest of us, and I said he should take charge of it, especially as each of us had his hands full, and I was thinking of taking a trip to America before the end of the year. The Major had some acquaintance with Fleet Street men, too. John Hollingshead, who afterwards became a well-known actor-manager, was really the first who helped him to see the *C. & D.* through the press, and as articles were wanted he got others to write them. Dr. Strauss, a regular old Bohemian, but a medical doctor and a fair chemist, I believe, was a contributor, and there were others—Dr. Archer, Charles Quin, Cargill Brough, W. B. Tegetmeier, and P. L. Simmonds—they all helped."

"I presume, though, that Morgan Brothers gave the ideas. The *C. & D.* to-day is on the original lines, is it not?"

"All that was carefully thought out. For instance, we had decided on giving a Market Report, but when it came to writing one we were in a difficulty, so we went to some of our wholesale friends in the City whom we bought from, and told them what we wanted; would they supply it? They were quite indignant and advised us not to attempt it. But the item was on our programme; we had to carry it through, and we did. How? I don't clearly recollect. There was a great deal of bother, of course, and statements were circulated to the effect that the *C. & D.* reports were inaccurate. We gave them the 'lie direct.' You see, the prices which we quoted were what were paid in public auction or fixed on 'Change. They were bound to be right."

Market Report.

It is noteworthy that these early objections to our Trade Report have recurred from time to time. A few years after the *C. & D.* was established the opposition to it reached such an acute point that it was deemed to be politic to put the question to subscribers, "Will you do without the Trade Report?" and the answer was an emphatic "No." So the Report was continued. Shortly after the journal became a weekly there was a recrudescence of the opposition to our Trade Report, which the proprietors again had to combat, and now the Report is as sure a thing as sunrise.

The conversation with Mr. Morgan about the earlier issues of the *C. & D.* is largely reflected in these chapters of its history. The personal influence which he had in the development of The Chemist and Druggist is best known to those who have been associated with him in its direction. Had he been a registered pharmacist he could not have been more alive to the requirements of the commercial side of the calling or more sympathetic to its professional and technical necessities. As censor and mentor he has helped three generations of editors and publishers, and his memory assists us in recalling the incidents of the earliest days of the paper. We showed him the first number, and as he turned over the pages he remarked, "That issue cost us a thousand pounds. The present Lord Mayor's firm printed it—Truscott, Son & Simmons. A big slice of the 1,000*l.* went in paper. These were the days of the paper-duty, and paper was scarce and dear. I remember on one occasion Truscott's sent an urgent message to us in Bow Lane, saying that the *C. & D.* was on the press, and the paper was nearly done: 'Send some more.' We had difficulty in getting paper to match—couldn't get it, in fact; so a kind of a piebald issue came out that month. [The fact was mentioned at the time, we find.—Editor *C. & D.*] The repeal of the paper-duty by Gladstone was one of the best things ever done for journalism. It made it possible for us to enlarge the *C. & D.*, and hundreds of dailies, weeklies, and monthlies came into existence."

The overseas circulation of The Chemist and Druggist is one of its recognised distinctions. It is a circulation in itself, now running and progressing so naturally that those who have come on the staff in these later days are apt to forget that it had a beginning. The interviewer introduced this subject to Mr. Morgan with the question, "How did you get the overseas circulation?"

Overseas Circulation.

"To begin with," he replied, "we as merchants were in the export business, and most of our customers became subscribers—don't forget that the *C. & D.* has always been a subscription journal, confined to the trade; it was some years after it started before we sold single copies. Then we travelled, and where we travelled we introduced the *C. & D.* I paid my first visit to the United States in 1859, and went on to Canada afterwards. My brother Octavius

went to the West Indies in 1865. In fact, we all travelled in the interests of Morgan Bros., and where we travelled we introduced the *C. & D.*"

Looking up our files later, we found that Mr. Septimus left London in December 1859 to spend several months in the New World, and he placed it on record in our pages, under the pseudonym of "A Chip of the Old Block," that in the city of Philadelphia he secured twelve subscribers—*i.e.*, all the English-speaking druggists he could find. He also arranged for an American letter to be sent regularly to the *C. & D.*, a feature of this journal which has been consistently maintained, although contributors have changed. Mr. Morgan observed while in America that "medical and pharmaceutical literature, like other American journalism, finds a much larger amount of readers than at home. There every man," he said, "reads the daily paper and whatever other paper may appertain to his special business; by these means he keeps, as he curtly expresses it, *well posted*. I would recommend the proprietors of English drug-stores to go and do likewise."

Cables and Journals.

Mr. Morgan thoroughly caught the journalistic spirit, and his travels abroad acquainted him with the real avidity which our brothers and cousins overseas have for news from home—very slow to get in the days before submarine cables. While attempts were being made in the 'sixties to lay down transatlantic cables (the first successful one was in 1866, from Valentia, in Ireland, to St. John's, N.F.) Mr. Morgan worked out a scheme for a weekly newspaper called the "European Mail." "I reckoned," he said in the interview, "that if submarine telegraphy failed the 'European Mail' would be a huge success, and so it was at the outset. When I first visited Australia in 1869 I saw copies of the paper sold on the streets of Melbourne at five shillings each. We got just as many pennies for it."



Sir Walter Vaughan Morgan, Bart.,
Lord Mayor of London (1905-6), Treasurer of Christ's Hospital.
(From the portrait by Mr. T. B. Kennington in the Royal Academy.)

The "Mail" was purchased in 1883 by the late Mr. Quinton Hogg, of Polytechnic fame, who as a West Indian had in youth doubtless got all the news from home from it. Another of the journals originated by the firm is the "British Trade Journal, which they also disposed of in the 'eighties.

It may not be generally known that Messrs. Morgan Bros. were the first business firm in London to employ women as clerks. This is a tradition of the house which the present-day staff knows not the origin of, and, to satisfy curiosity, we asked Mr. Morgan how it happened. Was it design, policy, or accident?

"Pure accident," he replied. "We had advertised for an analysis clerk, and among the replies was one setting forth exactly the qualifications we wanted. We asked the applicant to call, and were surprised, when the day came, to find it was a lady. That was in 1858. An able woman she was: just what we wanted. Of course, we had women on the premises as packers, and when some of them saw that the analytical clerk was a bit higher than they were they grumbled. We told them that they would be treated just the same if they could do the same work. The result was that a few of them qualified for clerkships, and so the thing has gone on."

In this connection it may be mentioned that a pensioner of the firm is a lady clerk who entered their employment in 1865, and at the present time some of the most responsible business duties at 42 Cannon Street are done by ladies.

One of the first axioms which the proprietors took to heart was "When we say we do a thing, we do it." That was their guiding principle at a time in the history of The Chemist and Druggist when there were many inducements for the young proprietors to swerve from it, but it still stands as the guiding light of those of the second generation who have relieved the founders of the details of business direction.

First Results.

The Chemist and Druggist was well received by the trade. It was recognised to be something new, well-meaning, and to contain what was wanted at the time. It is, perhaps, difficult when contrasting the first number with any ordinary issue of the *C. & D.* of the present, to understand why; but such was the case. "Our reception has exceeded our most ardent expectations," wrote the Editor of that day; and he was warranted in saying so—more than a fourth of the space in the issue being occupied by a selection of congratulatory letters, besides the notes on pp. 17 and 18 which were in the nature of acknowledgment. The front page of No. 2 is reproduced, as a record, on p. 144. It was practically identical in "make-up" with No. 1, and is put there to contrast with another reproduction of the first departure from this style. It would be superfluous to comment upon the first number, seeing that a replica of it is enclosed with each copy of the present issue, and, thanks to the perfection to which photo-engraving has been carried, the printing is almost indistinguishable from the original. Every page of it, advertisements and literary, contains something which will touch the memory of the reader if he be elderly, and awake new interest in the minds of the younger generation. It will be observed that the issue contained sixteen octavo pages of literary matter, but that number was quickly exceeded; the issue of February 1860 contained twenty-eight pages, this inaugurating a permanent enlargement.

The first volume, including sixteen issues, September 1859

to December 1860, contained 412 pages, besides the index, or an average of twenty-six pages per issue. The second volume was made up of thirty-six page numbers, and the third and fourth substantially the same, but more advertisements displaced a few of the literary pages from time to time. We reproduce on p. 143 a series of photographs illustrating the growth of the volumes. First there is the volume of sixteen numbers for 1859-60; then the first quarto volume (1864) and the last of the volumes of monthly numbers (1885). These are of the literary section only, but as an appendix we give the complete volumes for 1908, both advertisement and literary sections. On the same page the growth of the *C. & D. Diary* is illustrated. All photographs are on the same scale.

With the second volume of the *C. & D.* there was an important new departure, a series of "headings" engraved on wood being introduced, including on the first page the title-piece which, in slightly altered form, is still used every week on the cover and on the first literary page. The "Reviews" heading consisted of the word with a pair of horn spectacles in front of it, and the first review over which it was printed was of the third edition of Fresenius's "Quantitative Chemical Analysis" as edited by Lloyd Bullock. "The Month" heading embraced the crescent moon and a constellation closely resembling the Plough. A butterfly with "Notes of Novelties" on its wings introduced a series of notes of non-commercial nature. Those of January 1861 included cod-liver oil pills, Professor Julius Thomsen's copper-carbon battery, and Dr. Buchan's sugar-coated pills. The last was a facetious criticism of the doctor's patent for improvements in pills, which was quoted thus:

Engraved Headings.

> "To compound the pills I take two ounces of gum gambogia, one ounce of pulv. rhoci optimus, one ounce of lingib, optimus, one ounce of sum cardium. I mix these ingredients with syrup, or other suitable matter, to form a mass." . . . We really cannot but sympathise with the ghost of the old author of the sometime celebrated but now somewhat antiquated "Domestic Medicine"; for if ever, like Hamlet's father, he "revisits the glimpses of the moon," he will see the walls pasted over with a very ill-favoured countenance—which, we presume, is intended for his likeness, unless it be that of the patentee. . . .

The next engraved heading was one with which our readers are still familiar—"Correspondence," the letters of the word being pierced by a quill pen. This heading has become familiar the wide world over, not only in the drug-trade, but in others, as journals connected with other businesses have appropriated it. We do not blame them; indeed, we have such regard for the heading that we have had a fresh engraving of it made for this number. "Notes and Queries," which then as now followed Correspondence, were for the first time headed by a design in which the emblem of a padlock and key was more distinct than the words; but this objection does not apply to the Trade Report heading, which consisted of the title printed on an open market note-book with three aconite-leaves as ornament. "Patents" was on a scroll, with crown on top and a pendant seal—quite official in character.

These engravings were among the first efforts at permanent sectional illustration made in trade-journals, and the first, we fancy, in a journal of pharmacy. "The tasteful emblematic illustrations which figure as headings to the several departments of the journal" were mentioned at the time as among the improvements promised, and they certainly broke new journalistic ground, serving the purpose of descriptive headlines in daily papers, so far as readers are concerned, and giving individuality to the *C. & D.* pages. They also represent the first efforts of a designer whose *chef-d'œuvre* was the notably fine emblematic design of foliage enshrining the title and a still and mortar, which was first employed on the first pages of the 1861 numbers. The artist was a man of note, and present experts regard the design as a fine example of Early Victorian fancy beautifully cut on the wood. It has been used on most of our title-pages, but not all (as we shall show later), and a new version of it, in colour and gold, has been selected as the centre-piece of the cover of this Jubilee Number.

It was also in the issue of January 15, 1861, that the "new candidate for Webster" appeared—the word "Pharmacist"—and the Editor of that day threatened to use it in the columns of the journal thenceforth in place of "the obnoxious '*chemist and druggist.*'" He did not carry out his threat uncompromisingly, but he gave British pharmacy a word which has since become of statutory significance. He thought he had coined it, but, as has already been explained in these pages, "Pharmacist" was used by Bulwer Lytton in one of his early novels long before it became "a new candidate for Webster." It is curious that while this signal was given for discontinuance of "chemist and druggist" as a designation for persons, it was simultaneously reported that The Chemist and Druggist had been discontinued—the first and last time that such a thing has been said of us, we fancy. The report led to the publisher explaining that "in accordance with our plan of supplying the trade only, booksellers' orders are never executed unless they can guarantee the copies getting into proper hands." This rule has been adhered to throughout—in fact, for many years we have insisted that the *C. & D.* shall go direct to the actual subscribers, in those cases where they

The Title "Pharmacist."

employ agents (booksellers or others) to pay their subscriptions.

The second year of the *C. & D.* (September 15, 1860) commenced with a new feature in its pages—the addition of a Supplement. The four pages which it comprised contained the Trade Report. This supplement was merely symptomatic of "pressure of matter." It was an expedient (either as a supplement to the issues of the fifteenth of the month, or as extra numbers between) resorted to periodically while the *C. & D.* was a monthly, in order to convey urgent intelligence to subscribers; and shortly after the journal was registered as a newspaper, a Coloured Supplement was introduced, and has been included in every issue. We have said that the supplement of September 1860 was symptomatic of a condition, but the remedy gave merely temporary relief, so that the proprietors and their staff had to seek for some more radical method of treatment. They thought they had found it when they published the following note in the issue of October 15, 1863:

ALTERATION IN THE SIZE OF OUR JOURNAL.

After much consideration we have decided to enlarge our journal in January next, and to give it in the form of the *Lancet*, *Medical Times*, *Grocer*, and other class publications. We are aware that many objections may be urged against the change; but, after carefully weighing the arguments for and against the new form, we find that the "Ayes" greatly predominate. On the lowest calculation we shall gain space for literary matter equivalent to the contents of four of our present pages. Every month we feel the want of this space, and are frequently compelled to leave out articles which we should like to present to our readers.

The first four volumes were octavo, the letterpress measuring 7¼ in. by 4⅜ in. across page, except the Correspondence, which was printed usually in column, as the Trade Report and Patents were in the first number. The new form was a quarto, with letterpress in two columns, each 9 in. by 3 in., and this form has been adhered to until the present time, except when we print formulas or other matter in three or four column measure, in accordance with exceptional acuteness of the complaint known as "pressure of matter." The change from octavo to quarto appears from the quoted note to have been attended with some hesitation, induced by so radical a departure from established precedent. The older contemporaries of the *C. & D.* in America, France, and Great Britain were quarto, and if one reads between the lines of the above note it is possible to find the trace of a feeling that the Editor was risking his journal's respectability by departing from the form which the Learned Societies used for their journals, and assuming one that has since become the model for weekly and monthly class journals. The change was dictated as much by increasing advertising as by pressure upon the literary pages, and the proprietors were looking well ahead when they decided to make it.



MR. SEPTIMUS VAUGHAN MORGAN.
(From the portrait by Mr. Arthur Hacker, A.R.A., exhibited in the Royal Academy.)

The first number of the new series consisted of sixteen quarto pages of literary matter and thirty-two pages of advertisements. There was no coloured cover (this was not introduced until 1873). We give on p. 145 a reduced facsimile of the first page.

The note on the "fresh start" indicates a return of editorial confidence. The artist of 1861 supplied a fresh drawing of the title design, which has since become our registered trade-mark. In its enlarged form this design has been used on the outside of the monthly and weekly issues, and was employed on the first literary page of each volume for three years (1865-67); then the smaller engraving of the same design began to be used (it was the "Editorial" heading during 1865-67), and is only departed from on exceptional occasions which required distinction. The first volume of the new series was Vol. V., and contained 200 literary pages. The contrast in size with Vol. I. is shown by the engravings. The title-page marked a change in the subtitle, thitherto "A Monthly Trade Circular," then "A Monthly Trade Journal," the only significance attached to which is that in later days a venerable contemporary occasionally referred to us as a "Glorified Trade Circular"—a term of ridicule which never hurt, because it was in essence the highest tribute to unparalleled success. The volumes continued to be in the neighbourhood of two hundred pages until 1868, when the one for that year jumped up to over eight hundred pages. This was due to the pagination of advertisements and literary matter being made continuous; there were really 330 literary pages and the rest advertisements. The literary pages were increased to thirty-two in October 1868, the fact being notified, and further increases were made from time to time, until sixty-four pages a month became the "quantity." The 1869 volume went into four figures in pages, then in 1870 there was a reversion to the old system of pagination (which has been strictly adhered to since), the volume numbering 382 pages. In the catalogue of the library of the Pharmaceutical Society the following used to be given under "Chemist and Druggist":

Note.—1859-86, monthly; 1886- , weekly; the numbering of the volumes is irregular, No. 16 having been omitted; Vol. 1 is in two parts, and wants title-page.

The explanation of the omission of a volume is sufficiently interesting to mention. There was no title-page to the first

volume. The next seven were marked Vol. II., and so on until the ninth, when the volume for that year was marked "1868—Ninth Year." As a matter of fact, the number for September 1868 commenced the tenth year. The changed method of marking went on until 1875, when the error was discovered, and the volume for that year was marked "Seventeenth Year." The volumes for 1876 and 1877 were the last in which this method of marking was used, and the title-page was a bold departure from precedent which we reproduce on p. 152.

The volume for 1878 returned to numerical numbering without notice being taken of the fact that the twentieth year meant the nineteenth volume. The title-page restored the 1861 engraving, and quotations from Plato, Hippocrates, and Goethe appropriate to pharmacy graced the page.

The growth of The Chemist and Druggist after the first decade was in marked contrast to its unpretentious progress previously. In 1872 Messrs. Morgan Brothers disposed of several departments of their City business, and were thus freer to give attention to their publications. They had also moved from 29 Bow Lane (now the Mansion House Station) to fine premises which they secured on the adjoining site, so well known as "42 Cannon Street." The journalistic staff on both sides had become more specialised and more experienced, and the volumes grew in bulk year by year, so that the journal came to be recognised as phenomenal in periodical literature. The volume for 1885, reproduced on p. 143, was almost four times larger than the 1864 one, and is notable for several reasons—first, as being the final volume of the monthly series; second, as bearing on its title-page the additional addresses Melbourne, Australia, and New York, U.S.; and third, for the development of an offshoot—"The Chemist and Druggist of Australasia"—to supplement The Chemist and Druggist by giving full reports of all matters of Colonial interest. In the last regard the pioneer work of the proprietors in the 'sixties had resulted in the *C. & D.* becoming, in the full sense of the term, an Imperial Journal of Pharmacy, in so far as it was as well known and as much thought of in distant parts of the Empire as it was at home. By 1883 it was being regularly supplied as an official organ to all the members of the Pharmaceutical Societies of New South Wales, New Zealand, Queensland, and Victoria. Since then this official recognition has extended, the members of seventeen societies in Australia, Ireland, New Zealand, South Africa, and the West Indies now receiving it. The establishment in 1885 of offices in Melbourne for the publication of a monthly Colonial journal, under the Editorship of Mr. W. G. Piper, from 42 Cannon Street, was the first part only of a new departure which the proprietors had in contemplation; indeed, had never had out of their minds since William Vaughan Morgan wrote in the second number (October 15, 1859) this paragraph:

The "C.D.A."

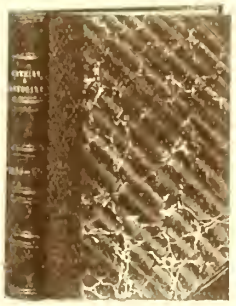
> The question of issuing a weekly journal requires consideration; we doubt if the trade are quite ripe for it yet; a few months' experience will doubtless throw light on the subject. We shall be delighted to appear weekly if supported.

The gratifying progress which the monthly journal made during a quarter of a century, the influence which The Chemist and Druggist exerted in pharmacy, and the business connection which had been made with the most experienced advertisers, were assets which any serious new departure might affect, so that it required more than ordinary courage to make a radical change—as is always the case when a business is going on well. The necessity for more frequent publication was, however, undeniable, so in February 1886 the announcement was made that The Chemist and Druggist would be published weekly on and after March 6, 1886. The time was undoubtedly ripe; pharmaceutical affairs were at the moment in a condition of ferment. The business interests of chemists and druggists were assailed from several directions, and the Chemists' and Druggists' Trade Association of Great Britain was endeavouring to repel attacks upon retailers. A free and more frequent organ of opinion was needed, so that all would be "posted" weekly in regard to the march of events, and that views of the trade might find expression before it was too late. These and other aspirations were immediately realised in the *C. & D.*, and our correspondence pages in the first volume of weekly numbers (January-June 1886) are eloquent of the advantage that accrued to the trade through the more frequent publication of The Chemist and Druggist. Seldom fewer than six of the thirty-two pages given weekly were devoted to correspondence; and as the years went on, and our news organisation advanced, it became necessary to apply the principle of compression rigorously to those contributions by devices, chiefly typographical, which tended towards getting the proverbial "quart into a pint pot." The first complete volume of weekly numbers (July-December 1886) contained 786 pages of literary matter, making 1,644 pages for the year, compared with 748 pages in 1885, and the number has since gone beyond 2,000 pages a year.

"C. & D." Weekly.

On April 1, 1899, our second millenary period commenced, No. 1,001, when the following statement was published:

> Last week we published the thousandth number of The Chemist and Druggist. We were not aware of this fact at



C. & D., 1859-60.
Original 8½ × 5½ × ½ in.



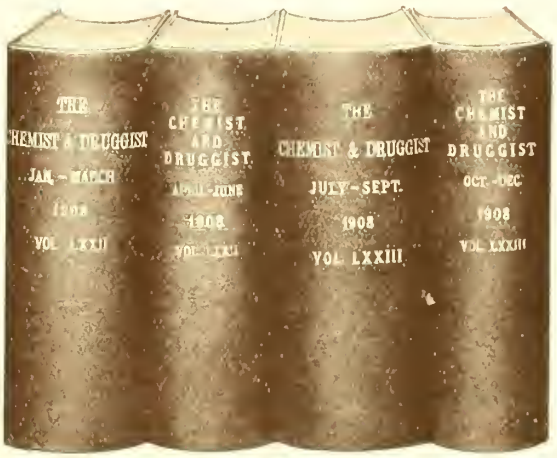
C. & D., 1864.
Original 10½ × 7½ × ½ in.



C. & D., 1885.
Original 10½ × 7½ × 2 in.

GROWTH OF THE "C. & D."

The engravings above and in the centre represent approximately the growth. The first volume was octavo and the econd quarto (1864). The third engraving is of the last volume of monthly numbers (1885), and in the centre here are the fifty-two issues (advertisements and literary) for 1908.



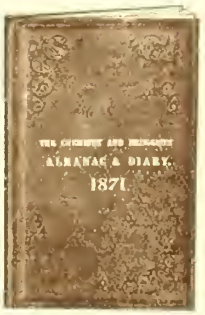
Fifty-two Numbers for 1908.

GROWTH OF OUR "DIARY."

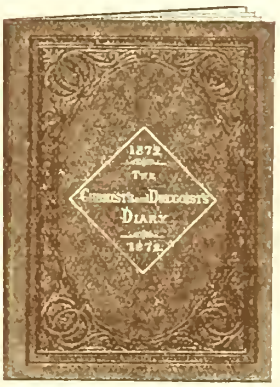
The first Diary 1869, shown below) was a small octavo, which became larger in 1871, and was still further enlarged to quarto (uniform with the "C. & D." page) in 1872. The fourth engraving is of the current year's "Diary," which is many times thicker than that for 1872.



Original 7 × 5 × ⅜ in.



Original 8½ × 5½ × ½ in.

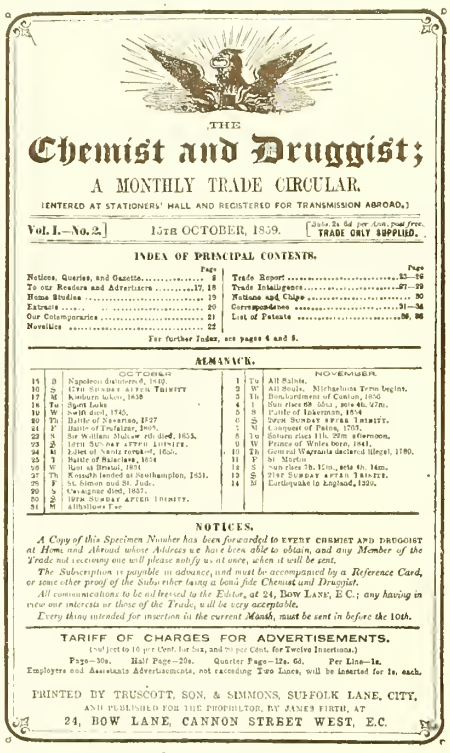


Original 10½ × 7¾ × ½ in.



Original 11½ × 8½ × 1½ in.

the time, for on the cover the number was designated the 988th. It appears, however, that somewhere in the days of our



THE

Chemist and Druggist;

A MONTHLY TRADE CIRCULAR.

(ENTERED AT STATIONERS' HALL AND REGISTERED FOR TRANSMISSION ABROAD.)

Vol. I.—No. 2.] 15TH OCTOBER, 1859. [Stable 2s. 6d. per Ann. post free. TRADE ONLY SUPPLIED.

INDEX OF PRINCIPAL CONTENTS.

	Page		Page
Notices, Queries, and Gazette	8	Trade Report	32—26
To our Readers and Advertisers	17, 18	Trade Intelligence	27—29
Home Studies	19	Failures and Chips	30
Extracts	20	Correspondence	31—34
Our Colemporaries	21	List of Patents	35, 36
Novelties	22		

For further Index, see pages 4 and 5.

ALMANACK.

		OCTOBER			NOVEMBER
15	S	Napoleon distinguished, 1812.	1	Tu	All Saints.
16	S	17TH SUNDAY AFTER TRINITY	2	W	All Souls. Michaelmas Term begins.
17	M	Lucknow taken, 1858	3	Th	Bombardment of Canton, 1856
18	Tu	Sport Lake	4	F	Sun rises 6h. 55m., sets 4h. 47m.
19	W	Smith died, 1745.	5	S	Battle of Inkerman, 1854
20	Th	Battle of Navarino, 1827	6	S	20TH SUNDAY AFTER TRINITY.
21	F	Battle of Trafalgar, 1805.	7	M	Conquest of Peten, 1703.
22	S	Sir William Shallow ridiculed, 1855.	8	Tu	Solomon died 11h. 20m. afternoon.
23	S	18TH SUNDAY AFTER TRINITY.	9	W	Prince of Wales born, 1841.
24	M	Edict of Nantz revoked, 1685.	10	Th	General Warrants declared illegal, 1780.
25	T	Battle of Balaclava, 1854	11	F	St. Martin
26	W	Rain at Bristol, 1851	12	S	Sun rises 7h. 12m., sets 4h. 14m.
27	Th	Kossuth landed at Southampton, 1851.	13	S	21ST SUNDAY AFTER TRINITY.
28	F	SS. Simon and St. Jude.	14	M	Earthquake in England, 1320.
29	S	Champagne died, 1657.			
30	S	19TH SUNDAY AFTER TRINITY.			
31	M	Allhallows Eve			

NOTICES.

A Copy of this Specimen Number has been forwarded to EVERY CHEMIST AND DRUGGIST *at Home and Abroad whose Address we have been able to obtain, and any Member of the Trade not receiving one will please notify us at once, when it will be sent.*

The Subscription is payable in advance, and must be accompanied by a Reference Card, or some other proof of the Subscriber being a bonâ fide Chemist and Druggist.

All communications to be addressed to the Editor, at 24, BOW LANE, E.C.; *any having in view our interests or those of the Trade, will be very acceptable.*

Every thing intended for insertion in the current Month, must be sent in before the 10*th.*

TARIFF OF CHARGES FOR ADVERTISEMENTS.

(subject to 10 per Cent. for Bad, and 25 per Cent. for Twelve Insertions.)

Page—30s. Half Page—20s. Quarter Page—12s. 6d. Per Line—1s.

Employers and Assistants Advertisements, not exceeding Two Lines, will be inserted for 1s. each.

PRINTED BY TRUSCOTT, SON, & SIMMONS, SUFFOLK LANE, CITY,

AND PUBLISHED FOR THE PROPRIETOR, BY JAMES FIRTH, AT

24, BOW LANE, CANNON STREET WEST, E.C.

Original Cover.

youth a miscalculation involving an error of twelve numbers was made, leaving our figures short of the proper complement. . . . . Our office arithmeticians have plodded through the series of nearly forty years' publications, and have found that the issue of last week, March 25, 1899, was certainly, as we have said, the millenary one. A journal which has reached its thousandth number and its fortieth year—a hoary old age as journals go—has proved its right to exist; and, invigorated as only well-established properties can be by the assimilation of new thinkers and workers, we start on our second thousand far better equipped for trade service by the accumulated experience which the past has yielded. The whole history of pharmaceutical legislation throughout the British Empire, the adoption of a score of enactments affecting pharmacists, the development of new systems of training, of new methods of business, and the evolution of a myriad of ideas and discoveries in science, in art, in medicine, and in domestic life have figured in those forty years and in those thousand numbers.

These words, from another pen than this, materialise the spirit which has been carried through the fifth decade of our existence, and we are entering on the sixth with the same principles of enterprise and initiative to guide us as a Journal of the Chemical and Drug Trades and of British Pharmacists throughout the Empire. We set down as the starting-point for the centenary celebration the volumes for the past year. May their shadow never grow less!

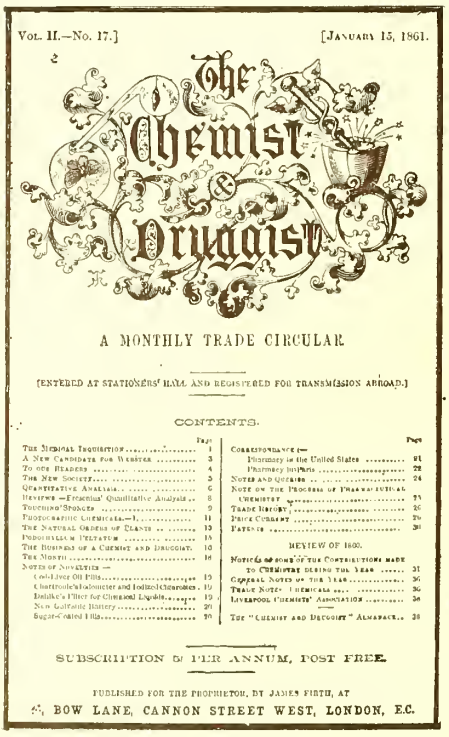
We had almost written as to the last-mentioned engraving, "What you get for ten shillings," which would have been wrong, for our annual subscription includes

THE CHEMISTS' AND DRUGGISTS' DIARY,

all delivered free to any part of the world It was not always thus. The annual subscription at the beginning was 2*s.* 6*d.* per annum post free, but when the sixth number appeared (February 1860) the subscription was increased to 4*s.*, and a promise was made that at the end of the year every subscriber would be presented with a "Pharmaceutical Almanack" gratuitously. This was issued with the number for December 1860, and was described as "The Chemist and Druggist Almanack" for 1861, "containing several useful tables which have been expressly prepared for it." It was the beginning of trade-journal diaries, and such an almanack was presented by the proprietors yearly. On January 15, 1861, the annual subscription was advanced to 5*s.*, and in December 1867 to 7*s.* 6*d.*, simultaneously with the enlargement of the *C. & D.* to thirty-two pages monthly, and a large sheet almanack was presented to every subscriber. In the following year the second phase of the evolution of our Diary began with the publication of "The Chemists' and Druggists' Almanack and Pharmaceutical Text-book, 1869," a modest crown 8vo booklet of 128 pages in "cloth gilt, price 1*s.* (free by post, 1*s.* 2*d.*)." The Editor had the temerity to say in the preface, "It seems somewhat singular that an important trade like that of the Chemist and Druggist should have remained so long without a special Almanack," thus ignoring the fact that the proprietors had been presenting one gratuitously for years. Doubtless his object was to sell the book, whose contents, apart from the preface of six lines, were as follows:

Calendar. General Notes, Useful Recipes and Hints.
Diary and Memoranda [on writing paper].
Stamps and Taxes. | Licences. | Patent Medicines. | Patents.
Weights, Measures, and Arithmetical Formulæ. By J. C. Brough, F.C.S.
Thermometer Scales. | Barometer Scales.
Practical Hints on Dispensing and Kindred Subjects. By Joseph Ince, F.L.S., F.C.S.
Photography, by the Editor.
Directions for Restoring the Apparently Drowned.
Digest of the Principal Acts of Parliament affecting Pharmacy.
Homœopathy.
Friends in Council.
Poisons. | Veterinary Hints.
Pharmaceutic Specialities. | Toothache.
Books for the Pharmacist.
Novelties of the Year.
Learned Societies in London.
Metropolitan Hospitals for General Purposes.
Special Hospitals. | Trade Directory.

Modest though the book was, it contained the germs of hardy annuals in the *C. & D. Diary*. The same style



Vol. II.—No. 17.] [January 15, 1861.

The Chemist & Druggist

A MONTHLY TRADE CIRCULAR.

(ENTERED AT STATIONERS' HALL AND REGISTERED FOR TRANSMISSION ABROAD.)

CONTENTS.

	Page		Page
The Medical Profession	1	Correspondence—	
A New Candidate for Webster	3	Pharmacy in the United States	21
To our Readers	4	Pharmacy in Paris	22
The New Society	5	Notes and Queries	24
Quantitative Analysis	6	Note on the Progress of Pharmaceutical Chemistry	25
Reviews—Practical Quantitative Analysis	8	Trade Report	26
Tournier's Stoechiometry	9	Price Current	29
Photographic Chemicals—I.	11	Patents	30
The Natural Orders of Plants	13		
Pharmacia in Potatoes	15	REVIEW OF 1860.	
The Business of a Chemist and Druggist	16	Notices of some of the Contributions made to Chemical Science during the Year	31
The Month	16	General Notes on the Year	36
Notes of Novelties—		Trade Notes—Chemicals	36
Cod-liver Oil Pills	19	Liverpool Chemists' Association	38
Chartreuse Balsamic and Iodized Chlorodyne	19		
Ingalls's Fluor for Chemical Liquids	19	The "Chemist and Druggist" Almanack	38
New Galvanic Battery	20		
Sugar-Coated Pills	20		

SUBSCRIPTION 5*s.* PER ANNUM, POST FREE.

PUBLISHED FOR THE PROPRIETOR, BY JAMES FIRTH, AT

24, BOW LANE, CANNON STREET WEST, LONDON, E.C.

Improved Cover, 1861.

and price were adhered to in 1870, but a change was made in the 1871 issue, which was enlarged to full octavo, and

was published at 1*s.* in boards, with crimson edges (the one reproduced), and in cloth gilt at 1*s.* 6*d.*, postage 2*d.* extra; for abroad, the cloth-bound copies only were sold. Professor Attfield, Dr. W. A. Tilden, and Mr. Sidney W. Rich were the special contributors in 1871. The enlargement was not enough, for in the following year the size was doubled and blotting-paper was placed between the writing-paper leaves. It was thus drawing to the form which has since become familiar in pharmacies all over the world. In 1874 the title was abbreviated to "The Chemists' and Druggists' Diary," and the price advanced to 2*s.* 6*d.* post free. When notification of this was made (December 1873) it was announced that the subscription to the *C. & D.* would, from January 1, 1874, be 10*s.*, including, as a thirteenth number, the "Diary" for 1875. That was one of the happiest ideas which the proprietors have ever carried into effect. It ensured for the "Diary" a better circulation, and for the editorial and publishing staffs greater freedom for expansion. From that year it has grown in bulk and utility. The engravings of 1869-72 Diaries and of the current year's one show in a measure how this forerunner of such publications has grown. With the issue for 1877 black cloth was used as a binding, and this style has not since been departed from.

In the lives of journals, just as in the careers of men, are momentous events, some of which are more prominently memorable than others, and a few of them seem to be shaped by Destiny, so wide an influence have they. In our case one of the most outstanding episodes of the half-century, and the feature of the first year's work, was the foundation of the

UNITED SOCIETY OF CHEMISTS AND DRUGGISTS.

There is no occasion now to relate fully the history of that remarkable organisation with which the early years of THE CHEMIST AND DRUGGIST are interwoven, but the leading facts are worth recalling. Numerous letters had been received and published in the issues after the first as to the need for better organisation of retail druggists. Several questions, such as shop-hours and the regulation of prices, were agitating the trade at the time, and there was a common feeling that something had to be done, but the only existing organisation of chemists and druggists was the Pharmaceutical Society, which at the time was felt to be a somewhat superior body, with ideas above such mundane questions as when pharmacies should be closed. Besides the Society was not attracting the young men of the trade as it might have done; its leaders were elderly men, well off, and not at all disposed to champion the aspirations of the rank-and-file of the retail drug-trade. The time was ripe for a new organisation of the trade, and there had been ample demonstration of what was wanted in the correspondence columns of the *C. & D.*, which, however, was a mere letting-off of surplus strain. Something was needed to utilise the force that remained, and it was this that the proprietors of the *C. & D.* were asked to provide. Several persons in later days claimed to have done the deed, but our records show that it was Mr. John Wade, of Westminster, who acted as the ambassador to Bow Lane on behalf of the aspirants for organisation, and



MR. J. WADE.




OUR FRESH START.

We appear before our readers in a new dress, but not in a new character. We have grown bigger, but all our old subscribers will recognise the features of the CHEMIST AND DRUGGIST of former years. We are what we have always been—the journal of the trade from which we take our name, devoted to the interests of its members.

We have in former numbers explained the reasons which induced us to alter our dress, but we may again state that the chief reason was the uncomfortable tightness of the old one. We found that the book-form prevented our free growth, so we discarded it and adopted the habit of the leading continentals. We have now not merely a larger surface of paper to work upon, but a form in which printed matter can readily compared with every appearing beauty.

We do not think it necessary to describe the scope and objects of the CHEMIST AND DRUGGIST, as they are plainly revealed by the contents of the present number.

SCIENCE.

NOTE ON INSECT WAX.

BY BARNARD S. PROCTOR.

In the August number of last year's CHEMIST AND DRUGGIST, I drew attention to several materials which have been used as substitutes for wax. I have now to correct "a error into which I had fallen with regard to the sample supplied to me as "Insect Wax of China." I have since been induced to think that the sample thus described was Japan Tree Wax, as it corresponded very closely with that article in all its properties, and "China Wax" is one of the several names under which Japanese wax is known in commerce. I am indebted that the true insect wax is not to be found in the market, but through the kindness of Mr. D. Hanbury, I am enabled to note the properties of an authentic specimen.

It greatly resembles spermaceti in appearance, but is not quite so white, and the fracture, which is crystalline and sparkling, is finer grained, in short such harder and more brittle than spermaceti, and its melting point may be stated

Vol. V. 1864. No. 85.

ON A NEW METHOD OF ANALYSING OIL CAKE

FIRST PAGE OF THE FIRST QUARTO (JANY. 1864).

the result was an editorial article in THE CHEMIST AND DRUGGIST of August 15, 1860, which gathered together in expressive phrase the materialisation of the suggestions which had been set forth in past numbers regarding early and Sunday closing of chemists' shops and other topics, and the article proceeded thus:

We have come to the conclusion that nothing practical can be done to establish a fair working benefit society, to carry out the early and Sunday closing arrangement, and to bring the minor questions of a trade analyst, advanced prices for late hours, etc., to an issue, without an organisation which shall be apart from, and yet shall possess the confidence of the trade.

The following is the outline of the proposed Association:

PRELIMINARY PROSPECTUS.

UNITED SOCIETY OF CHEMISTS AND DRUGGISTS.

The promoters of this Association feeling impressed with the fact that so numerous and intelligent a body as the chemists and druggists of the United Kingdom have no organisation that fairly represents their interests as a trading community, propose that this Society be formed, having for its objects:

1st.—The establishment of a Mutual Benefit Fund for the assistance of members in sickness, old age, and death; formed upon such calculations by the most eminent actuaries, as shall combine economy of charges with absolute security.

2nd.—To carry out, by district meetings and a combined action, any improvement that may be deemed necessary for the welfare of the trade, such as early and Sunday closing of the hours of business, or any other arrangement that may at any time be of advantage.

3rd.—To watch the progress, support or oppose any legislative enactment that may affect the interests of the chemists and druggists as a trading community.

4th.—To enable members of this Society to have an analysis made of any article at a nominal fixed rate of charges by an able trade analyst, or analysts, duly appointed.

5th.—To keep a registry of the transfer of businesses, of required partnerships, and situations for assistants, etc., and to be the general recipient and exponent of any trade requirement.

This is merely a preliminary statement, to invite suggestions and co-operation, but should the organisation be well supported, and thus grow stronger, it is obvious that other beneficial objects could well be added, such as the formation of a school and asylum for decayed members of the trade. In the furtherance of a Society like this, which will help to provide for old age, sickness, poverty, widows and orphans, and for the advancement of the moral, social, and material interests of the trade, the promoters feel they can with confidence appeal to the chemists and druggists of the entire kingdom for support. The subscription for membership will probably be limited to five shillings per annum; and in the meantime they request the hearty co-operation of all classes in the trade by sending their names to the Editor of the "Chemist and Druggist,"

who has kindly consented to receive the same. If sufficiently encouraged, the promoters will then be in a position to immediately publish the names of gentlemen influentially known and connected with the trade, who have consented to act as a general council and executive, together with full arrangements for the government of the Society.

The promoters are happy to say that upon the condition of the scheme being earnestly and promptly taken up, one well-known firm has already promised a donation of a hundred pounds.

This project of a general trade union is simple enough, and it can be used for any business purposes when it is once planted. The first element in its success will be a cordial co-operation among masters and assistants, and a liberal confidence in those who for plain, business-like, trade-benefit purposes, are willing to take the preliminary trouble and expense of the work.

The project was immediately taken up, Mr. Cyrus F. Buott being appointed Secretary *pro tem.*, with temporary offices at 25 Bow Lane, E.C. The proprietors of The Chemist and Druggist, as an earnest of their good will, promised 100*l.* to start the benefit fund when 1,000 members were obtained, and in reply to the Secretary they wrote :

> It is our opinion that no society can expect to prosper which is not absolutely self-supporting and independent of all extraneous aid. The basis of the Society you have undertaken to inaugurate is so broad, its terms of membership are so moderate, its objects so useful and irreproachable, that if it is not warmly supported the fact would seem to prove either that the trade do not see the necessity of such an organisation or that they have not the necessary spirit to do aught but write and grumble at things as they are, expecting (apparently) Providence to step in and do the work which lies before them. . . . We feel convinced that *now* or *never* should be your motto. The public mind is ripe for the early-closing movement. . . . It must also be borne in mind that the next Session of Parliament will most assuredly see attempts to decrease the power of the trade and to increase those of the medical profession, which is firmly organising itself with that object in view.

The legislation referred to was the Sale of Poisons Bill, introduced in the House of Lords by Lord Granville in May 1857, and reintroduced in modified form by Lord Derby the following year, and again in 1859 by Mr. Spencer Walpole, but the protests of chemists defeated it. Retailers responded well to the appeal of the proposed Society. Mr. Buott worked with energy, having many willing helpers throughout the country and in London. The first public meeting in connection with the Society was held at the London Coffee House, Ludgate Hill, on Wednesday, January 23, 1861, Mr. Alderman Dakin being in the chair. Mr. Wade was the moving spirit of the meeting, and on his motion those present decided to form the Society on the plan outlined in the *C. & D.* It was noted at the time that the presence of Alderman Dakin in the chair was "sufficient guarantee that the meeting had nothing of the hole-and-corner character about it." The Alderman (Sir Thomas Dakin, as he became during his year as Lord Mayor of London, 1870-71) had been apprenticed to Bryden & Co., wholesale and export druggists, Abchurch Lane, E.C., which business he, along with his brother, Mr. Joseph Dakin, acquired in 1850, when the trading name was changed to Dakin Bros. As the business continued to flourish and expand it became necessary to remove to more commodious premises. The house in Creechurch Lane, off Leadenhall Street, was then purchased, and in 1865 Mr. J. Harrison Dakin (son of Mr. Joseph Dakin, and governing director of the company into which the business has since been formed) joined his father and uncle. The latter had in 1843, when he was thirty-five years old, been elected to the Common Council, and became an Alderman just about the time the United Society was formed, and Lord Mayor in 1870. He was a member of the Fishmongers' Company and a director of a number of public companies, and lived to be an octogenarian. He was, in short, one of the most respected men in the City of London, and his business house was equally well known, especially in the East. The Alderman was elected the first President of the United Society at the meeting referred to, when it was reported that 800 members had joined. The Society took an office at No. 2 Bell Yard, Doctors' Commons, where Mr. Cyrus F. Buott, son of Mr. Cyrus Buott, was installed as Secretary, while his father attended to the work of organisation. Mr. Buott, Sen., was a man of remarkable eloquence and energy, and it was he, rather than the son, who made the Society. He appears not to have been cut out for the humdrum of secretarial work, but was as clever as any man in pharmacy before him or since in getting chemists together, showing them what they lacked and how they could get it. He travelled the country, addressed meetings, did all that man could do to get chemists to unite, and had a good measure of success. By the end of the first year the Society had 1,200 members, and at the first festival, held at the Freemasons' Tavern on February 27, 1862, Alderman Dakin was supported by Mr. James Burgoyne, Mr. Henry Matthews, F.C.S., Mr. Joseph Dakin, Mr. Alfred Preston, Mr. William Vaughan Morgan, and Mr. Charles Linder. It was announced that the Benevolent Fund amounted to 222*l.*, of which Messrs. Morgan Bros. had given 100*l.* "Free trade for chemists and druggists, and protection from unnecessary legislative interference," was the principal toast of the evening.



Sir Thomas Dakin.
First President of the United Society of Chemists and Druggists; Lord Mayor of London, 1870-71.

The Dakin Business.

The first real piece of work that the United Society undertook for the trade was in connection with Mr. Hunt's Juries Bill of 1862. The Executive of the Society initiated the idea that chemists and druggists should be exempted from jury-service, and the leading members, including the President, the Lord Mayor, and Alderman Bowker, of Manchester, and others, used all their influence with members of Parliament to get a clause introduced to this effect, with the result that the following was placed on the papers of the House of Commons :

> That all chemists and druggists actually trading as compounders and dispensers of medicines be exempted from service on juries.

Success seemed certain, but the United Society had not reckoned with the Pharmaceutical Council, who prevailed upon Mr. Powell to move in the House of Commons an amendment to the clause limiting the exemption to pharmaceutical chemists. Both proposals were rejected in the House of Commons, but the Pharmaceutical Society's clause was inserted by the House of Lords. The Commons, led by Sir George Grey, still declined to agree with it, but the House of Lords insisted, and finally on July 31, by forty-five to twelve, the Lords' amendment was agreed to, Sir George Grey saying, "If the pharmaceutical chemists should be exempted, there would be still

Chemists and Jury-service.

stronger grounds for exempting the chemists and druggists in small country towns." This incident brings into relief the attitude of the two Societies towards each other, and the effect that the energy of the younger body had in stimulating the Pharmaceutical Council, which at that time had fallen into a state of torpid inactivity.

The United Society grew steadily, and at the second annual meeting the membership was reported to be over 2,000. In the second annual report it was suggested that an Act of Incorporation should be applied for (*C. & D.*, 1863, p. 151), and the principles outlined were the germ of the Pharmacy Act, 1868. The drafting of the "Act" was stimulated by the General Medical Council's proposed Bill (May 1863) to amend the Medical Act, which would have brought pharmacy under medical surveillance. The United Society, from its new offices, 20 New Ormond Street, W.C., organised strong opposition to the proposals, but the Pharmaceutical Society "hailed the principle of the proposed measure as correct." Mr. Alderman Dakin presided over a meeting of the United Society on November 27, 1863, at which the Medical Council's pharmaceutical proposals were condemned, and it was decided to proceed with the Act of Incorporation. This was also the feeling of chemists throughout the country, and the members of the Pharmaceutical Society became so alarmed at the silence of their Council (presided over by Mr. G. W. Sandford) that 300 of them sent in a petition requesting that a general meeting should be called. Chemists not members of the Society also petitioned, and on March 17, 1864, the meeting was held, the result being that by a majority the members decided to make application to Parliament for an amended Pharmacy Act. The outlines of this were submitted by Mr. Flux, the leading principle being that—

Struggle for an Act.

> No person should keep open shop for dispensing the prescriptions of duly qualified medical practitioners unless registered as a pharmaceutical chemist under the Pharmacy Act, or as a chemist and druggist under this Act.

The United Society had in February approached the Pharmaceutical Council with a view to a Conference in regard to the Act of Incorporation or an amended Pharmacy Act, and, receiving the cold shoulder, decided to proceed independently. An Incorporation and Defence Fund was started and well supported. The principles of the proposed measure to regulate the trade of chemists and druggists in Great Britain were discussed and adopted by chemists and druggists in nearly 100 towns in the country, and on October 1, 1864, the Executive Committee decided to have the draft put into proper legal form. When this was being done—

> The United Society were prompted by the recommendation of Dr. Alfred Taylor, in his report to the Government on poisoning, to introduce some restriction upon the sale of poisons . . . . which would meet the wishes of the Government, inasmuch as while it preserved the sale of deadly poisons in the hands of persons qualified to dispose of them, it in no way restricted the sale of simple medicaments of daily requirement.

The Pharmaceutical Society's Bill did not deal with poisons (which was what Parliament and the public wanted), and when the two Bills were referred, on March 29, 1865, to a Select Committee of the House of Commons, that Committee adopted the principles of the United Society's Bill. It is important to note that it was not merely "a wretched Poisons Bill," but included the following provision :

> All persons now keeping, or who shall hereafter keep, shop or store for the retailing of Drugs, and all persons who shall be in any manner engaged in retailing or dispensing dangerous Drugs, simple or compounded, as enumerated in Schedule A of this Act, or in the Bye-laws as hereinafter empowered to be made, or in the retailing of other than Patent Medicines . . . shall produce to the Registrar appointed under this Act certificates from duly appointed examiners of their competent knowledge of Drugs and Medicines in general use, with their doses, and of their ability to read Physicians' Prescriptions with ease and accuracy, and be registered as chemists and druggists. . . .

The dissolution of Parliament put an end to this attempt at legislation, but the effort was not without fruit, for Lord Elcho (now the Earl of Wemyss) succeeded in bringing about a consultation between the leaders of the two Societies, the result being that committees of both were appointed to work in harmony under Mr. G. W. Sandford, and from this co-operation emanated the Bill which became the Pharmacy Act, 1868.

Co-operation Obtained.

There was some opposition within the United Society to this co-operation. Alderman Dakin had retired from the presidency, and Mr. Henry Matthews, F.C.S., an analytical chemist, had taken his place. The Secretary and some members of the Council foresaw that the objects of the United Society were to be realised, and that with realisation there would be no further use for it, as the Pharmaceutical Society, being the older and chartered body, would be charged with the administration of the new law. The Chemist and Druggist had made this plain, and supported the new policy—the only practical means of meeting the wishes of the Parliament of the day. The dissatisfied party in the United Society bitterly attacked the *C. & D.*, which gave fair publicity to what they said and wanted, but would not back their policy. The "Progress of Pharmacy," written by the late Professor Redwood, refers to the matter, and we may quote what he said as a looker-on :

> "The advantage of having a journal devoted to the interests of the promoting body was also felt, and a proposition was made for establishing a new journal to represent the United Society, but this was not carried out. The proceedings of the Society had, from their commencement, been reported in the *Chemist and Druggist*, a trade journal which had started some years previously in a small way, but was at this time expanding to larger dimensions, and ultimately became a popular, widely circulated, and influential publication. The independent spirit manifested by this journal sometimes gave offence to the leaders of the United Society, but no sufficient grounds were adduced for discrediting its reports and comments, which on the whole appeared to be true and fair."

The United Society's history from 1865 to 1868 is a record of wrangle. Mr. Cyrus F. Buott, the Secretary, had, towards the end of 1864, become associated with the Wholesale and Export Drug Co., Ltd. (a sort of co-operative concern which had originated in the Society), and his father, so familiar with the work, succeeded him as Registrar and Secretary, and, "in spite of all the President, officers, and committee could do, he assumed sole mastership and management of the Society's affairs." The seventh annual meeting was held in London on July 1, 1868, when the balance of the Benevolent Fund was voted to Mr. Buott as some recognition of his great services. He was at the same time charged to reconstruct the Executive Committee, which was done at a meeting on October 8, when Mr. Joseph T. Slugg, F.R.A.S., was elected President, twelve influential men being appointed Vice-Presidents, and nineteen others as members of the Executive Committee. Resolutions were passed regretting that the Society's plans of legislation had been spoilt during the last stage of the Pharmacy Bill's passage through Parliament; at the same time the meeting asked for a fair trial of the new Act, and promised protection to members and assistants if it was needed. This was the Swan Song, and the United Society as an active entity was no more heard of.

United Society's Decadence.

There is no doubt that the Society did splendid service to British pharmacy and justified its creation. The impartial student of history will concede that at least. We may also claim for it that it was the means of giving the Pharmaceutical Society of Great Britain a place in public affairs which was not given to it through the Charter or the 1852 Act; but at the time the Society received the 1868 Act it had not quite thrown off the effects of the lethargy which had benumbed it for a decade, so that it did not realise the potency for good which the new law held out for pharmacy, and it still dreamt that its power lay in multiplicity of individual subscribers rather than in administrative activity. Its conductors have generally been blind to the fact that the 1868 Act put the Society in a position of unassailable security, and have resented the establishment or growth of other national organisations of pharmacists, such as the British Pharmaceutical Conference, the Chemists' and Druggists' Trade Association of Great Britain, the Proprietary Articles Trade Association, and even the Federation of Local Pharmaceutical Associations. Were it possible to go into the history of these organisations we should be able to show that The Chemist and Druggist has always been liberal in supporting them as organisers of trade benefits not secured by the statutes entrusted to the "parent Society." It has sometimes happened that The Chemist and Druggist has actually helped to form protective associations, such as the Society of Chemist-Opticians; but with the formation our active participation in their affairs has ceased, the reason being the same as in the case of the United Society—"no society can expect to prosper which is not absolutely self-supporting and independent of all extraneous aid." Perhaps our facility of switching back to the main line of our business (which is the preparation and publication of a weekly journal), combined with our attribute of saying what we think when it has to be said, has contributed to the not unheard-of assertion that The Chemist and Druggist is antagonistic to association. It is really the protagonist of organisation in the trade, and when that does its work, and there is no more to do, we are averse to perpetuation, because experience has proved that many "associations" and "societies" are kept up long after their work is done, simply because officers are installed whose salaries or kudos depend on their existence.

Benefits Forgot.

"C. & D." WRITERS.

The first page of our issue of January 15, 1864 (reproduced on p. 145), bears the names of two widely different personalities—Barnard Simpson Proctor and William B. Tegetmeier—which we may take as typical of two classes of writers who have contributed to The Chemist and Druggist—viz., practical pharmacists and men of literary ability in the departments of knowledge and practice which are connected with or related to pharmacy. At the present time our contributors are so numerous and so widely scattered that a year's volumes represent the direct reports and opinions of not fewer than 300 writers who are in constant communication with us. Such a multitude cannot figure individually in these chapters of our history, except in an expression of our regard for the assistance which they render in making The Chemist and Druggist what it is week by week. There is among writers a respect for the old masters which relieves us from excuses for mentioning some of the men whom the proprietors called to their aid in 1859, and of whom the only living representative is Mr. Tegetmeier. He was the writer of the "Notes of Novelties" in the earlier volumes—these comprising extracts from foreign journals and comments upon new departures and novel articles in chemistry, pharmacy, and medicine. He also contributed signed articles, one of the most notable being an account of Young's paraffin-works at Bathgate, in Scotland, which he visited for the purpose—a piece of enterprise on the part of the conductors of the journal which was bigger than it seems now when travelling is cheap, comfortable, and expeditious. The article was one of a series on chemical and pharmaceutical manufactures commenced in 1861 and continuing through three volumes. They included visits to Messrs. Colman's mustard and starch works at Norwich, Price's candle-works at Battersea, Mr. Ransom's herb-farm at Hitchin, Davy, McMurdo & Co.'s and Huskisson & Son's chemical factories, London, and some others. They form a small mine of information on matters which the generation of to-day sometimes want to know but have no other means of learning. Mr. Tegetmeier has now reached "an age at which one only seeks for rest," he says in a letter written to us from North Finchley, where he resides in retirement, but he still talks happily of the early days of the *C. & D.* and those who were associated with him on the "unattached staff." He was born at Colnbrook, Bucks, in 1816, being the eldest son of Mr. G. C. Tegetmeier, surgeon, R.N. His record, as given in "Who's Who," shows how varied are his accomplishments and how busy a man he has been:

Factories Visited.

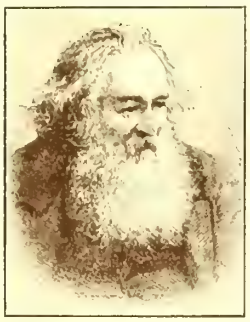


Mr. W. B. Tegetmeier, F.Z.S.
The oldest living *C. & D.* contributor.

Educ.: Univ. Coll., London. Medallist at London Univ. and Society of Apothecaries. Educated as medical student; Lecturer at Government Training Coll.; made special study of variation in animals, working with Darwin, the results published in his work on Variation, *vide* Index "Tegetmeier"; demonstrated the primary circular form of the bee's cell, quoted in the Origin of Species; proved the homing faculty of pigeons by flights from Crystal Palace to Brussels, and expresses for the Trinity House; worked with Sir Walter Gilbey on the extension of the poultry industry, and with Miss E. Ormerod on the influence of the sparrow; formerly Davis Lecturer to Zoological Society; contributor to the Ency. Brit.; collector of library of several hundred volumes of Shelleyana; jointly with A. Halliday first secretary of the Savage Club; was on the staff of the *Field* for more than forty years. Publications: The Poultry Book, 1870; Pigeons, 1870; Table and Market Poultry, 1895; The Homing Pigeon, 1872; Natural History of the Cranes, 1881; Pallas' Sand Grouse, 1888; Pheasants, 1897; Horses, Asses, and Mule Breeding, 1895; The House Sparrow, 1899.

When Mr. Tegetmeier lived in Pall Mall he kept several hives of bees, and it is told that he traced whither they went for nectar by dusting them with an adhesive powder. As a result of this experiment he found his bees on Hampstead Heath. One of his contemporary contributors to the *C. & D.* was Dr. G. L. M. Strauss, a Canadian by birth, who was educated in Germany as a medical practitioner, graduated as M.D. and Ph.D., and came to England to seek his living by his pen. A Bohemian by descent, he was a

Bohemian in actuality, alien to conventionality; in short, one of a type of literary men common enough in that day, but now almost extinct—men who were really learned, ready writers when they were willing, and always good fellows. Dr. Strauss was so well loved by his "brother Savages" that when one of the recurring strokes of misfortune overtook him, they put him in a public-house as the proprietor, and he reserved a floor of the place where the Savage Club met. This was all so like Paragot, "the Beloved Vagabond," that Dr. Strauss might have been the original of Mr. William J. Locke's delightful creation; but there are points of difference, and Mr. Locke tells us that he never heard of Dr. Strauss. Our contributor was, however, the original of Dr. Goliath in Charles Dickens's "Mrs. Lirriper's Lodgings." The good doctor's last contributions to the *C. & D.* were "An Octogenarian's Pharmaco-Medical Reminiscences of Sixty Years Ago," which appeared in three issues of our 1884 volume. He died at a venerable age in 1887.



Dr. G. L. M. Strauss.

Mr. C. W. Quin, F.C.S., who contributed regularly for a number of years to the first volumes, was in the early days of his association with the *C. & D.* appointed Superintendent of the Chemical and Pharmaceutical Products Section of the Great International Exhibition of 1862, and this position enabled him to write for the *C. & D.* a series of articles on the Section which appeared in the volumes for 1862-63. Mr. Quin's articles on photographic chemicals in the volume for 1861 are, as far as we can trace, the first systematic series of articles on photography specially written for chemists and druggists. The series began (January 15, 1861) thus:

Early Photography.

> Photography has spread so wonderfully through the length and breadth of the land that there is scarcely a hamlet or village too small or insignificant not to be visited at least occasionally by some of the votaries of the art. The quiet chemists of the picturesque townlets are now and then frightened from their propriety by the apparition of a mild gentleman in spectacles, with very black fingers and wristbands, who asks, in a very courteous but exciting manner, for a small quantity of pyrogallic acid. . . . The poor amateur is obliged to go away disappointed. . . . To obviate these unpleasant occurrences we propose giving a list of chemicals which ought to be kept by every one of our subscribers.

Then followed descriptions of the processes in use at the time: (1) The Daguerreotype, (2) the Talbotype or Calotype, (3) the waxed paper, (4) the albuminised glass, (5) the positive, negative, and dry collodion processes, and (6) the various printing processes. From that time photographic notes became a periodical feature in our pages, and just as some of the most eminent photographic houses have evolved from chemists' shops, so have some of the most distinguished photographic experts contributed to The Chemist and Druggist. Mr. Quin in 1870 obtained an important appointment on the staff of the "Levant Herald," but continued to send us communications from Turkey. A fellow-contributor with him was Dr. Henry M. Noad, F.R.S., one of the pioneers in electro-chemistry, whose manual of chemical analysis may be remembered by septuagenarian pharmacists, and probably by many who are younger. He contributed "Chemical Notes" to the *C. & D.*, and a series of articles on quantitative analyses, besides many other subjects. Contributions on commercial materia medica and economic botany were made by Professor Archer (afterwards of Edinburgh) and by Mr. Peter Lund Simmonds, F.L.S., who continued to write for us until he entered the Charterhouse, where he died a few years ago.

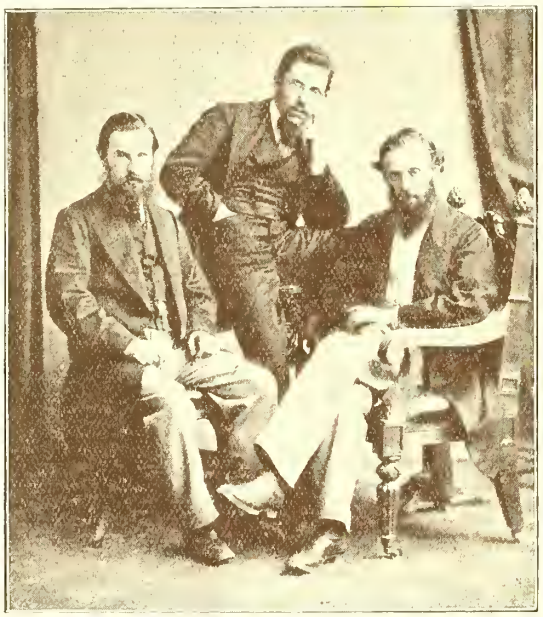
The link between such contributors as these and those who were actually engaged in pharmacy was the first salaried Editor, John Cargill Brough, F.C.S., who contributed in 1859 as one of the "Savage" group (he was a founder of the Savage Club and its earliest historian). He was in his twenty-sixth year when he became Editor, having been born at Pontypool, on February 11, 1834. His father, Mr. Barnabas Brough, was a brewer and wine-merchant in that town, and was possessed of histrionic and literary gifts, which were transmitted to his children—William Brough (a very prolific writer of burlesques), Robert Brough, John Cargill Brough, and Lionel Brough, the veteran actor, who for a short time was at 42 Cannon Street on the publishing staff, and is the originator of the plan of selling newspapers on the streets through men and boys, and who, had he not been blessed with exceptional histrionic gifts, might still be a newspaper man or a millionaire. A third generation of the family—in Fanny Brough, Mary Brough, and Sydney Brough—still grace the stage as character actors in the first rank. Of John Cargill Brough it is not possible for us to write as adequately as the charm of his personality merits. During the ten years he was associated with us as Editor he came to be one of the best-liked men in British pharmacy, and the intimate friend of a few of its leaders. He also numbered among his friends some of the principal essayists, playwrights, and novelists of his day. Mr. Brough was not a pharmacist, nor was he a trained chemist. After his education at the Manchester Grammar School he came to London and was assistant to his father, then accountant in the "Illustrated London News" office. While there he attended science classes in the evening, and in 1852 he entered the audit department of the South Western Railway as a clerk. His abilities were noted, and he was appointed Secretary and Librarian of the Literary and Scientific Institution founded by the railway company. To that institution he lectured on scientific subjects, and in his spare time cultivated the art of writing to such purpose that in 1857 he decided to follow literature as a profession. This he did as a "free lance," with a fair measure of success in the periodicals of the day, and in 1859 published his first book, the "Fairy Tales of Science." His work as Editor of The Chemist and Druggist is reflected in the first ten volumes, the growth of which has already been alluded to. He was never a strong man, for, having had rheumatic fever in boyhood, he struggled through life with a valvular affection of the heart which made him a pathetic figure, especially to those who knew not the humour of the man. During the bi-society

"Jack Brough," Editor.



Mr. J. C. Brough, F.C.S.
Editor of the *C. & D.*, 1860-70.

controversy he had to bear the brunt of the displeasure which Mr. Buott and his supporters poured on the *C. & D.* for its independence; and when he politely asked the Pharmaceutical Society to admit him, as the Editor of the *C. & D.*, to the meeting at which the need for amendment of the



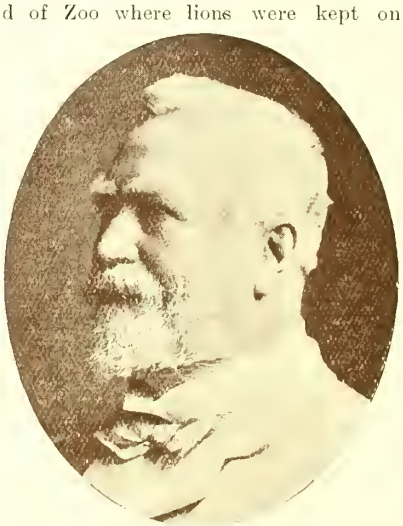
An 1867 Triumvirate.
John Attfield, Jack Brough, Henry Brady.
(From a photograph by Abbott, Dundee, lent by Dr. John Attfield, F.R.S.)

1852 Act was urged, he was denied the privilege. Yet it was this man who was responsible for directing the policy which demonstrated the need for a new Act, and put the Pharmaceutical Society on its feet! The British Pharmaceutical Conference was the neutral ground upon which Mr. Brough found favour in the sight of the pharmacists of the day, who were accustomed to ask, "Can any good thing come out of Cannon Street?" He does not appear to have attended the inaugural meeting at Newcastle-on-Tyne on September 2, 1863, but he was present at Bath in the following year, and was at once admitted into the inner circle, by his election as a member of the committee. He continued to attend as regularly as his health permitted, and at one of the meetings a photograph was taken of John Attfield, Henry B. Brady, and him, which has since become a notable pharmaceutical picture. Mr. Brough was appointed first editor of the "Year-book of Pharmacy," when it was started in 1870. Soon afterwards he became seriously ill, and Mr. Joseph Ince was called in to assist in the production of the book. It was then that he resigned the editorship of The Chemist and Druggist and the sub-editorship of "Nature," which he had held since its foundation by Sir Norman Lockyer in 1868—he wittily remarked at the time that he gave up Nature so as to live, and he capped this a year later by saying, "I only live because I can't afford to pay for a coffin." Less arduous work was found for Mr. Brough in 1870 as Librarian and Superintendent of the London Institution, a position which he filled with distinction until his death on September 7, 1872, in his thirty-eighth year.

The B.P.C.

Of Mr. Brough's intimate personal friends in pharmacy who remain with us are Dr. Attfield and Mr. Michael Carteighe, both of whom speak of him in terms of deep respect. Mr. Carteighe, in conversation, has told us that he first met Jack Brough in 1860 at a Savage Club Saturday evening or something of the kind. Mr. Carteighe was not then in pharmacy, but was demonstrator in chemistry at University College, along with Carey Foster, to Professor Williamson. He had been contributing popular science articles to some magazines, and met Brough on a literary footing, but he had no opportunity of renewing his acquaintance until 1865 at the Birmingham Conference. He got to know him more intimately at Nottingham in the following year, when Brough read a paper "On the Proposed Introduction of Two Systems of Chemical Notation in the Pharmacopœia," which Mr. Carteighe said at the time "contained many valuable suggestions, and demonstrated the absurdity of overloading a practical work with theoretical formulæ." In the evening (the social arrangements being confined then to a dinner given by the local chemists), Messrs. Brady, Brough, Carteighe, Giles, Ince, Reynolds, Schacht, and a few others had supped in a private room of the Lion Hotel, the landlord of which was at the head of the table in the good old-fashioned way, and after the cloth was removed he sang a rollicking song. Brough was a very retiring man, and had been brought into the company by Brady, who had heard him sing at Birmingham. He was again called on, and Mr. Carteighe says that the effect of his quaint and humorous ditty was electric. From that time Mr. Brough became the recognised mainstay of these social events, and, as his health grew worse, every one of the men whom we have named became a willing helper to him in his work. It was at Exeter in 1869 that he and Mr. Brady and Mr. Carteighe perpetrated a literary joke in connection with the meetings of the British Association and the British Pharmaceutical Conference. This took the form of a sixpenny pamphlet entitled "Exeter Change for the British Lions, Edited by Snug the Joiner." The collaborators were "Nick Bottom" and "Peter Quince," but which was Brady and which Carteighe we need not say. Exeter Change, it may be explained, was in London, and was a kind of Zoo where lions were kept on show.

Michael Carteighe's Reminiscences.



Mr. Carteighe.

Leading scientific men of the day, their manners and methods, were "taken off" in "Exeter Change"; thus Guthrie's glyptic formulæ were satirised; there was a wonderful advertisement about apomorphine, in which it

was quoted by the hundredweight (a hit at Matthieson, the discoverer of this morphine derivative); and there was a clever imitation of Professor Tyndall's style in an article "On the Alcoholic Compound called Punch." Amid much other "gracious fooling" were poems of sorts on the British Pharmaceutical Conference, one beginning thus:

O Pharmacists! for converse met,
My thoughtful muse remembers yet
The days of Sixty-Three,
When in Newcastle-upon-Tyne
Some rare good fellows did combine
To found the B.P.C.

Brady and Reynolds, able pair,
Attfield and Bentley from the Square,
And Henry Deane the wise,
Have come to the conclusion bold
That Pharmacy is growing cold
For want of exercise.

One of the finest things in the whole "squib," however, was a parody of "Locksley Hall," which we have heard more than one refer to with enthusiasm for its cleverness. This was by Brough.

Mr. Carteighe looks back upon those times with the happiest of recollections. There were giants in those days, and he, we feel sure, was one of them, though young. Brough, he tells us, was soon admitted into the intimacy of Square men, and one of the finest speeches Mr. Carteighe ever heard Mr. T. N. R. Morson make was at a Square dinner at the Ship Hotel, Greenwich, when late in the evening he got up and proposed the health of Mr. Brough in a speech appreciative of his journalistic abilities and charm of manner. It was done in a way that greatly moved the man who had to respond. As we have said, Mr. Brough's poor health brought him the assistance of his friends, and thus it happens that Mr. Carteighe is ranked with our old contributors. His name is not to be found as the author of articles, because he wrote with all the weight of the editorial "we." Confessing to this impeachment, he tells us that on one occasion he called at Cannon Street to read the proof of an article just after the Editor had received a deputation on the subject which put facts before him quite contrary to what the article set forth. Straightway Mr. Carteighe wrote another article arguing exactly on the opposite line!

Another close associate with Mr. Brough in editorial work was Mr. J. C. Braithwaite, whose most conspicuous contribution was a criticism of the British Pharmacopœia, 1867. Mr. Brough himself had dealt with the chemistry of the 1864 edition, and when the 1867 one was published he and Mr. Braithwaite wrote a lengthy series of articles upon it. Mr. Joseph Ince commenced his contributions to the *C. & D.* by expressing in the issue of November 15, 1859, his sincere regret "that THE CHEMIST AND DRUGGIST has . . . so far descended from its original character as to have become a mere rival to the 'Pharmaceutical Journal.'" He gave us much advice about how to behave, and concluded by assuring us that if we followed it he believed that ten years thence the *C. & D.* would be "an established English institution," but if our pages reflected "the sentiments of every would-be martyr with a grievance" they were "destined to line trunks." Mr. Ince got over his squeamishness about the *C. & D.'s* policy, and from 1859 until his death last year he was on our list of contributors. The "Pharmacalia" columns, which were a feature of the monthly volumes for a dozen years or so up to 1886, were his, and his work in other directions secured him intimacy with the journal which few outside writers have attained.

Students' Corner.

It was Mr. Brough who started the "Corner for Students," which was an anticipation of the need for direction of the home studies of apprentices and assistants that the Pharmacy Bill foreshadowed, as well as an outcome of the new British Pharmacopœia. The first exercise was given in the issue for January 1868, viz.:

Give the weight of a pint of each of the following acids in the Brit. Phar. 1867: *Acidi*: Aceticum, acet. dil., hydrochloricum, hydrochlor. dil., nitricum dil., sulphuricum, sulphuricum dil., sulphurosum.

Answers were sent in by J. Robinson (Chester-le-Street), I. Tansley (Kingsland Road), A. Nicholls (Penzance), T. S. Sanders (Salford), J. Young (Leicester), and W. N. C. Mr. Sanders and Mr. Young were correct. No prizes were offered until June 1868—a copy of Eliot and Storer's "Manual of Inorganic Chemistry," which was won by Mr. W. M. McNaughton, of Belfast, with sixty-nine marks, Mr. R. Moss being second with sixty-eight marks, and all the students named above also occurred in the list. The "Corner" was Mr. Brough's pet hobby, but in November 1869 Mr. Richard J. Moss, of Dublin, took charge of it, and conducted the "Corner" without interruption until March 1901, when Dr. Leonard Dobbin, of Edinburgh, took over the work; we trust that he may continue this excellent service to young chemists as long as his compatriot did. Both were first-prize winners in their youth.

Early Portraits.

It was in Mr. Brough's time that portraiture became a periodical feature in the *C. & D.* Messrs. Maclure, Macdonald & Macgregor had a new process of lithography, and on plate paper they produced for us a whole-page portrait of Mr. H. Sugden Evans, President of the Pharmaceutical Society, which was inserted in the *C. & D.* of February 15, 1870. The portrait of Mr. Brough reproduced on p. 149 was done originally by the same process. THE CHEMIST AND DRUGGIST Portrait Gallery continued for many years. When lithography gave way to wood engraving, each portrait cost fifteen guineas (ten paid to the artist for his drawing on the wood and five to the engraver for his work). In the *C. & D.* of May 15, 1885, a new departure in portraiture, so far as we are concerned, was made, the subject being Mr. Carteighe. The portrait was drawn by a "Vanity Fair" artist, who had several "sittings" of his victim at Dinneford's, in Bond Street, and produced more than one sketch before he "caught" the subject in his characteristic attitude and manner. The original was reproduced by lithography, and the small engraving which we now give has been taken direct from the original, as it brings out points in the artist's effort which were lost on the stone. Other subjects were put "in the pickle," but the reception accorded to the Carteighe cartoon did not encourage us to go on. He has expressed his willingness that we should revert to it on this occasion.



THE CARTEIGHE CARTOON.

F

On the retirement of Mr. Brough the proprietors of The Chemist and Druggist did not require to go far for an Editor. There was then on their staff a young pharmacist, Mr. Alfred Charles Wootton, who came to Cannon Street in 1868 as publisher, and during Mr. Brough's frequent illnesses that year he occasionally saw the literary as well as the advertisement pages through the press and otherwise helped in the literary department. He was transferred to the editorial chair, and it is not difficult to trace the firmer grip of pharmaceutical matters which was exhibited in our pages from the first issue of 1870. Under Mr. Wootton's editorship the journal grew to the dimensions which have already been illustrated, and as it grew in bulk it grew in influence and importance. Mr. Wootton appears to have early recognised that the value of editorial direction and policy lies less in denominated personality than in finished literary style and matured opinions. Thus it happens that one searches in vain for the signature "A. C. Wootton" in the volumes for the thirty years during which he was Editor. He helped to make The Chemist and Druggist a veritable "Times" of pharmacy, so that when he wrote it was The Chemist and Druggist that thundered. Apt in expression, fearless in criticism, quick to perceive the trend of the times, and ready to help along any movement for the benefit of the craft, he secured as Editor the approbation of the proprietors, the devotion of his colleagues, and the esteem of hundreds of pharmacists at home and abroad who came into personal contact with him. When he retired in 1899, after thirty years' service, Mr. Wootton was entertained to dinner by the leading members of the British drug-trade at the Hôtel Métropole. He has since served the Pharmaceutical Society of Great Britain as a Councillor, and his recent retirement is no indication of decreasing interest in the craft, but rather an earnest that he will continue his service for pharmacy in other directions. We may add that it was during Mr. Wootton's editorship that the series of *C. & D.* books was started in 1888, he editing "Veterinary Counter-practice" and writing "Pharmacy and Poison Laws of the United Kingdom." It is also worthy of note that an early feature of his editorship was the institution of prize competitions. The first of these was announced in January 1871, when a prize of two guineas for an essay on "Business Habits" was offered, and the late Mr. F. Baden Benger, of Manchester, gained it. Soon after postcards were introduced he recognised their possibilities for journalistic competitions, and started a series when the *C. & D.* came to be published weekly. He was the first Editor to do this; "Truth" came next. To tell all the ideas which Mr. Wootton materialised in practice would be to write a book. When he retired he was succeeded by the assistant editor, who had joined the staff in February 1886, and his other assistants are still with us.

"A. C. W." Editor.

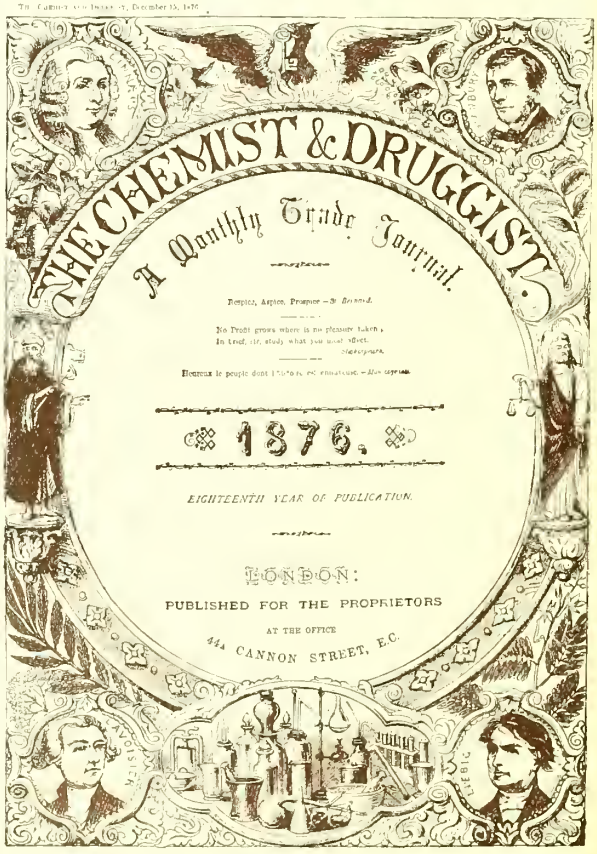


Mr. A. C. Wootton.

"C. & D." Books.

THE BUSINESS SIDE.

So far in inditing this record we have referred but slightly to the advertisement side of The Chemist and Druggist; withal, it is the bigger and better part of each issue. Without this support from manufacturers and wholesalers The Chemist and Druggist, like every other independent or non-subsidised newspaper and journal on the face of the earth, would either be a very small paper or cost not less than a shilling per number. So regard must be given to our advertising or publishing organisation, which, as part of the whole, has participated in the policy through which The Chemist and Druggist has from the first striven towards perfection, by giving the best of everything that sellers can offer to buyers in advertisements, and the best that can be obtained by the literary part for the information of subscribers. Both are essential to the existence of the journal, and fifty years of that existence have demonstrated that it is through both that The Chemist and Druggist has made its reputation. It is not necessary to decide which part is the more attractive in journals as a whole, but the oft-repeated statement that subscribers read the *C. & D.* "from cover to cover" is not received by the editorial staff as a reflection upon their work, but rather as a compliment to the skill and industry of the publisher and his staff in bringing together announcements of business houses and presenting them in so attractive a manner that readers like them, read them, and buy from them.



A Novel Title-page.

Turn again to the replica of our first issue. The literary matter is intensely interesting still, but we feel sure that expert advertisers will say that the advertisements far excel the literary pages in interest. "Grey hair restored to its

original colour" is the first line that strikes the eye in the first advertisement (p. iv). The picture of the woman still figures on stock labels. From the next advertisement we learn that the supposed-to-be-new method of wholesale trading by quotation of low prices for cash was in vogue fifty years ago. Respirators (p. vi) have almost vanished, but they were an anticipation of the present microbic age, and so we might go through all the advertisements and gather observations pertinent to our remark that publishers are valuable contributors to history, as well as the most business-promoting agents that the world knows.

Mr. James Firth was the first publisher of THE CHEMIST AND DRUGGIST. He was in the employment of the proprietors when it was started, and his business was to get advertisements and subscribers, put the paper to press, distribute it, and see that everybody paid in advance or when the accounts became due. Mr. Firth fulfilled these duties admirably, and won the respect of his employers and fellow-workers. In July 1866 he retired from the position in order to devote his time exclusively to the publication of "The Ironmonger." Mr. William Canning, a chemist and druggist, succeeded Mr. Firth, but did not retain the position long, being replaced in February 1868 by Mr. Wootton, who, as already explained, became editor when Mr. Brough retired. All three publishers had had as their assistant a young lad who had received his preliminary training in the establishment of Messrs. Cassell, Petter & Galpin, Belle Sauvage Yard, and came to the *C. & D.* offices in February 1863—viz., Mr. Henry Walker. Only his youth had stood in the way of Mr. Walker succeeding Mr. Firth, and by the time Mr. Wootton assumed the editorship Mr. Walker had proved his capabilities so fully that his years were forgotten and he was made publisher. He took up the work at a time when the drug-trade and its allied branches in this country were just beginning to realise the advantages of trade-journal advertising. Messrs. Morgan Bros. had themselves made liberal use of our advertisement-pages for a dozen years until they retired from the druggists' sundries business, and we may fairly claim that their advertising in THE CHEMIST AND DRUGGIST not only contributed to their success, but convinced others that the old way of doing business in the drug-trade could be improved upon by judicious and liberal advertising of the goods one dealt in. By 1872 the trade had begun to realise that advertising is something more than keeping a name before the public, and that it really means selling goods. Mr. Henry Walker started his publishing career as certain of the truth of this statement as he was that the reigning Sovereign was Queen Victoria. Moreover, he was quite as sure that THE CHEMIST AND DRUGGIST was the best medium for advertising to the chemical and drug trades. His first independent publishing effort was in connection with "Exeter Change," already referred to. The editor wanted to sell it, and appealed to Mr. Walker to help him, with the result that Mr. Walker visited Exeter and organised a plan of campaign. He got local booksellers to take stock of the pamphlet, employed sandwich men to walk the streets advertising it, and in other ways gave "Exeter Change" publicity that carried it right into the heart of the British Association and won for it the support of the visiting pharmacists. It was a financial success.

Firth First.

Advertising to Sell Goods.



MR. FIRTH.

When Mr. Walker took up his work as publisher of the *C. & D.* in January 1871, our Exchange Column was started, and it appeared in the literary pages. The announcement which headed the Column is worth repeating, as showing the initial idea :

Exchange Column.

> This column is for the use of chemists and druggists who wish to obtain or dispose of surplus stock. It is intended to supply an opportunity for the transaction of that class of business which is generally described as "bargains." In order to pay expenses, a fee of one Halfpenny per word is charged, which must be paid in advance.
>
> All correspondence respecting any of the articles mentioned below must be addressed to the publisher of THE CHEMIST AND DRUGGIST, Colonial Buildings, Cannon Street, London, and on the envelope must be distinctly marked the figures attached to the advertisement. All letters will be forwarded by the publisher to their proper destinations, and with that his share in the transaction will cease.

"The experiment has proved very satisfactory," said the *C. & D.* of May 15, 1871, when it was stated that the names and addresses of advertisers might be added to the advertisements, the whole being at the rate of a halfpenny per word, or, if the name and address were not included, a penny per word. The Column continued to grow in the appreciation of all branches of the trade, and in November 1883 it occupied nine columns of the issue. This was so serious an encroachment on the literary space that in the following month the Exchange Column was placed in the advertisement section, "in close proximity to the advertisements for assistants, situations, etc."

It became necessary some years later for the publisher to act as a kind of banker between buyers and sellers of goods advertised in the Exchange Column. Under this system the buyer sends us the money for the goods, and when we hear from him that they are satisfactory, and not till then, we hand over the money to the seller. We charge the buyer a commission of 6*d.* on any transaction of 3*l.* or less, and 1*s.* if above that amount.

The Exchange Column has been, and still is, most useful to the trade. Indeed, we have frequently heard pharmacists say that a single advertisement in it has paid their annual subscription to the *C. & D.* Were we to lapse into statistics here, it might be possible to give figures showing how many advertisements have been inserted in the Column during the eight-and-thirty years it has been in the *C. & D.* and the value of the goods it has sold, but that is not our intention. We have referred to the Column as marking the start of Mr. Walker's reign as publisher; for, although he does not claim to have started it, it is under his fostering care that it has grown and done such good service.

The business of the publisher of such a journal as THE CHEMIST AND DRUGGIST is varied in character. Necessarily he must be a first-class salesman. The advertising-pages which he has to fill are, in the trading sense, so much goods upon which capital has been spent, and the cost of which is as accurately known to the producers as, say, the cost of a tincture is to a manufacturer. The publisher must know how to sell the space at a profit; but he must be expert in many other things, such as printing, accountancy, office-management, and letter-writing, and must also possess a sharp eye for improvements in his journal. When Mr. Walker became publisher the *C. & D.* was printed on white paper outside and inside, just as "The Lancet" is to-day. In 1873 a coloured cover was placed on it, which gave the journal distinction, added to the revenue, and was the

beginning of an unending series of improvements in that regard. The cover was of orange-coloured paper, similar to that of the Coloured Supplement of to-day, and the ink was black. This was continued well into the weekly era, when a smoother, lighter-coloured, and weightier paper was introduced, with blue printing. No other external change worth noting was made until July 1889, when a specially designed cover was printed by lithography for the Summer Issue. This was a distinct innovation in drug-trade journalism, and was strictly reserved for the Winter and Summer Issues, which grew in beauty year by year, new artists working on new ideas each successive season. The Summer Issue of 1897 was notable on account of the cover being produced by the three-colour printing-process. An illustrated description of the process was given in the issue. We have sometimes wondered if appreciation of that effort was commensurate with the expense and trouble which the production involved. It was early days for three-colour work, few were actually in the commercial field with it, and the plates requisite for the sheet were the largest in area which up to that time had been produced. The printers felt it to be a bold experiment, but the result justified it, and, although the process is now an every-day one, the cover of our 1897 Summer Issue compares most favourably with the best examples. It combined reproductions of a water-colour sketch, direct photographs of May & Baker's chemicals, and boxes of soaps in May, Roberts & Co.'s advertisement, with Cadbury's cocoa and a bottle of Apenta water on the back of the cover, the frame of the latter being composed of a wreath of medicinal plants in flower, also directly photographed by the three-colour process. Mention of this process recalls that a sheet of our Winter Issue for 1894 contained fourteen photographs printed by the collotype process, these illustrations being printed in colour before the letterpress. This also was a new departure, and the biggest thing of the kind done up to that time. One of the photographs showed the Pharmaceutical Council in session at 16 Bloomsbury Square, with Mr. Carteighe as President. The changes which fifteen years have worked on that body are strikingly shown by the fact that only six of the members then round the table are now on the Council. We endeavour, in the covers to our Summer and Winter Issues, to reflect some feature of the time, either in artistic execution or eventful incident. On the present occasion a scheme has been selected which is characterised by simplicity rather than ambitious display; the idea being to unite emblems which have been associated with The Chemist and Druggist throughout the first fifty years of its existence, and to produce the design by methods which combine the art of 1859 and 1909.

Coloured Covers.

The practice of inserting insets in the *C. & D.* may be said to have commenced with No. 1, with which Messrs. Morgan Bros. circulated their illustrated price-list. Wholesalers generally were somewhat slow to recognise the advantages of this method of delivering lists and circulars to buyers, and when Mr. Walker became publisher he began missionary efforts in this direction. In the days of the monthly *C. & D.* the issues for January 15 and July 15 were reserved for insets, and a glance through the volumes for the 'seventies shows gradually increasing utilisation of the *C. & D.* for this purpose. When weekly publication was commenced the last issues in January and July were reserved for insets, and the number and artistic or commercial value of circulars and price-lists which have since been entrusted to us for distribution have steadily grown since Mr. Walker's happy idea of creating Winter and Summer Issues. It is only newspaper men who can fully appreciate the significance of this success, for the conditions are all against growth, in so far as the Post Office regulations prohibit the distribution by newspaper-post of journals containing such insets as those which firms connected with the drug and chemical trades supply to us for distribution. The Chemist and Druggist has from the first got over the difficulty by the simple expedient of paying a higher price for equally expeditious and sure methods of distribution. In our Summer Issue, 1891, the following paragraph appeared:

Insets.

> This is the largest number of any journal of pharmacy which has ever been published, and, in point of variety and practical usefulness all through, we believe it to have never been equalled. We have used over 12 tons of paper in its production, not including the wrappers, which alone make a line nearly five miles long.

Seven years later, in the issue of July 30, 1898, an editorial article commenced thus:

> Twenty tons of paper will not suffice for this edition of The Chemist and Druggist, and the number of persons who have been engaged on its production, including printers, engravers, binders, artists, writers, and publisher's staff, have to be counted in hundreds.

This marks the progress, and another ten tons have since been added, in spite of the facts that we work within limits which are the subject of international agreement as to carriage and that the publisher sighs, like Alexander the Great, for fresh worlds to conquer.

Insets as supplements differ technically from the Coloured Supplement which has been inserted in each weekly issue of the *C. & D.* since 1886. The weekly Supplement was designed for the insertion of small advertisements, the announcements of transfer agents, the Exchange Column, and particularly advertisements of situations open and wanted—the last having been a prominent feature of the *C. & D.* from its foundation. Again The Chemist and Druggist led the way with the Coloured Supplement. Such a thing had not been heard of until it appeared twenty-three years ago, but now it is a common feature of trade journalism, whether it is wanted or not. It is not necessary for us to claim that the *C. & D.* Coloured Supplement is unique: it is so, and there is no doubt about it. It serves as a labour exchange to the drug-trade; it sells businesses, and is deservedly regarded by all sections of the trade as the indispensable and sure medium for filling scores of business wants. This is due, in the first place, to the character of the *C. & D.* circulation; the right people subscribe for it, and the few who do not manage somehow to "get a read of it." We know that something also is due to the publisher's untiring efforts—but here we trench again upon the subject of "our noble selves" in the personal sense, and, after all, it is

Our Coloured Supplement.



Semi-Jubilee Souvenir.

Results that count most at 42 Cannon Street. In that connection we recall the manner in which the publisher celebrated the semi-jubilee of the foundation of THE CHEMIST AND DRUGGIST. We have before us a generous octavo brochure, measuring 10 in. by 6 in. and bound in red cloth. It is illustrated on p. 154. The contents consist of a facsimile of the title-page of THE CHEMIST AND DRUGGIST, facsimile of *The Chemists' and Druggists' Diary*, dimensions of the advertisement-pages, facts concerning THE CHEMIST AND DRUGGIST, tariff for displayed advertisements, and selected opinions of experienced advertisers. These opinions consist of facsimiles of letters written in December 1883 by the following firms :

Semi-Jubilee Souvenir.

ALLEN & HANBURYS, Plough Court, London, E.C.
BARNETT & FOSTER, Eagle Wharf Road, London, N.
W. H. BAILEY & SON, 38 Oxford Street, London, W.
J. T. DAVENPORT, 33 Great Russell Street, London, W.C.
EVANS, SONS & CO., 56 Hanover Street, Liverpool.
FLETCHER, FLETCHER & STEVENSON, Holloway Road, London, N.
HOWARDS & SONS, Stratford, London, E.
INGRAM & ROYLE, Upper Thames Street, London, E.C.
G. B. KENT & SONS, 11 Great Marlborough Street, London, W.
KILNER BROS., King's Cross, London.
LEATH & ROSS, 9 Vere Street, London, W.
LYNCH & CO., 192 Aldersgate Street, London, E.C.
S. MAW, SON & THOMPSON, 7 to 12 Aldersgate Street, London, E.C.
MAY & BAKER, Battersea, London, S.W.
F. NEWBERY & SONS, 1 King Edward Street, London, E.C.
J. ORME & CO., 65 Barbican, London, E.C.
ORRIDGE & CO., 32 Ludgate Hill, London, E.C.
EUGENE RIMMEL, 96 Strand, London.
SAVORY & MOORE, 143 New Bond Street, London, W.
GEO. TREBLE & SON, Bridge Wharf, Hoxton, London, N.

All these firms wrote in appreciative terms of the value of THE CHEMIST AND DRUGGIST as an advertising medium, most of them adding commendation of its literary contents. The brochure was issued by the publisher in 1884, and now, twenty-five years later, we find that of the twenty firms named all except two (who no longer appeal to the drug-trade) still advertise in THE CHEMIST AND DRUGGIST—themselves or their successors. In most cases their advertisements have been inserted without interruption; in a few instances there was some hiatus, but we may take the fact that they came back to the *C. & D.* as the highest compliment that could be paid to its value as an advertising-medium. These remarks make a fitting introduction to a chapter which must form part of this history—viz., the

ADVERTISERS IN 1859 AND 1909.

Taking the replica of No. 1 and looking at the Index of Announcements, we find a considerable number of advertisers in it who are still with us, and notes in regard to them are appropriate to this occasion.

Aerated-water Machinery.

S. Barnett, engineer, 23 Forston Street, Eagle Wharf Road, Hoxton, London, was the first in alphabetical order. Mr. Samson Barnett had just commenced business on his own account as a manufacturer of aërated-water machinery, and his advertisement on p. xlix of the replica offers aërating and bottling plant, besides materials such as syrups, sulphuric acid, carbonate of soda, bottles, corks, and wires. No. 23 Forston Street, Hoxton, adjoins the present London works of the firm. Mr. Barnett started in quite a small way, but the demand for his aërated-water machines increased so that every few years an enlargement of the workshops was necessitated. After about ten years he took into partnership his son Samson Barnett, jun., and his son-in-law, Frederick Foster, and this partnership lasted until 1880, when Mr. Barnett, jun., left the firm to establish himself as a consulting engineer in Westminster. From this time Mr. Barnett, sen., took but little active part in the business—in fact, he retired a few years later, leaving Mr. Foster sole proprietor until his death in March 1895. The business was then acquired by Mr. A. P. Blaxter, who had been prominently associated with it since it was first established. In 1907 Mr. Blaxter took into partnership his son A. P. Blaxter, jun., and his son-in-law, George William Chaloner. Since that date the constitution of the firm has not changed. The range of the firm's manufactures has considerably widened during the half-century, and they now make almost everything required in the various departments of the bottler's business, and those articles which they do not themselves manufacture they factor on a large scale. About 1870 they began to make aërated-water syphons, which up to then had been imported. The demand for the "London-made syphon" has been steadily progressive, and at the present moment a considerable part of Messrs. Barnett & Foster's London works is devoted to the manufacture and repairing of syphons and gazogenes. It was soon after 1870 that the firm interested themselves in producing something to take the place of the corked soda-water bottle, which was the only type then in use. The most noteworthy thing of this description was Codd's patent ball-stoppered bottle, which Messrs. Barnett & Foster developed and introduced as sole agents for the patentee. In those days the difficulty of making Codd's bottles had not been properly overcome, and for the first few years of its existence there was no standard size for the bottle-mouth, which varied so much that mineral-water manufacturers had to stock several sizes of the indiarubber rings to fit the bottles as they came along, whether large or small. This trouble was overcome by the Codd and Foster bottle-making tool, which ensured uniform dimensions for the bottle-mouth and one size of ring. The advent of the ball-stoppered bottle gave great impetus to the aërated-water trade : factories became more numerous and larger in themselves, so that not only was more mineral-water machinery required, but that machinery was in many cases of much larger capacity ; and as Barnett & Foster were in contact with the whole of the licensed users of Codd's bottles a great part of that trade went to them. They also made the first screw-stoppered bottle and introduced the split bottle. The automatic system of saturation, which takes the place of the earlier form of revolving agitator, was introduced by the firm in 1879, and has been an essential feature of many of the modern types of aërating machines, particularly those which work in connection with a supply of liquid carbonic-acid gas, which was introduced by the firm at a later date, and made it possible for retail chemists to manufacture their own aërated waters with greater facility than in the chalk-and-acid days. Many improvements in the mechanical filling of bottles first saw



MR. S. BARNETT.

the light at Niagara Works, and for years past the firm have been constructing ice-making and refrigerating machinery. Since the acquisition of their works at Bolton, Lancashire, every branch has been developed very considerably, the most interesting product of this side of the business to chemists being machines for cooling liquids. These Bolton works, which were acquired about fifteen years ago, were the old-established business of Galloway Bros., aërated-water engineers and brass-finishers, and Messrs. Barnett & Foster have entirely reconstructed the works on a new site and on modern lines. There the greater part of the engineering-work of the firm is now done, the London works being utilised mainly for syphon-manufacture, repairs, laboratories for the manufacture of flavouring and other ingredients, ware-rooms, packing-rooms, and general offices.



Mr. Blaxter, sen.

The announcement of W. J. Bush & Co., on p. xliv of the first number is the next in alphabetical order of the half-century advertisers. The firm had then, as now, works at Hackney, and an office at 30 Liverpool Street, which afterwards was removed to Artillery Lane, E. They are manufacturers of all kinds of essences for flavouring confectionery, wines, spirits, liqueurs, etc., and in their advertisement they gave quotations for essential oils and synthetic essences and ethers. The business was founded in 1851 by the late Mr. William John Bush, who was born in Westminster in 1828, and, after his schooling, was articled as a pupil to a West-end medical practitioner. Chemistry was, however, more congenial to his taste than physic, and he devoted so much of his apprenticeship time to it that when his pupilage ended he joined the staff of a firm in Great St. Helens. There he studied essential oils and experimented in the compounding of artificial and fruit essences, with results which warranted him in starting in business on his own account. It was small at first, but grew very steadily, and soon Mr. Bush established works at Hackney, where oils were distilled and essences for the aerated-water and confectionery trades were compounded. About ten years after Mr. Bush began to advertise in the *C. & D.* he was elected a member of the Common Council of the City of London, with which he was identified until his death in 1889. At that time the control of the business had passed into the hands of his oldest son, William Ernest, who, in 1896, had conferred upon him by the late Duke of Saxe-Coburg and Gotha the hereditary title and dignity of Baron de Bush, in recognition of his services as a Commissioner of International Exhibitions. Three other sons were associated with the eldest in the business—viz., James Mortimer Bush, Alfred W. Bush, and Alexander Bush. The business was converted into a limited company in 1897 with a capital of a quarter of a million, and a few years ago the administrative and other departments were concentrated at the company's fine premises, Ash Grove, Hackney. The business of the company has in the meantime expanded in several directions, although the germs of it are found in the 1859 advertisement. Thus, in addition to confectioners' flavours and soluble essences for aërated beverages, the company distil essential oils, make floral perfumes at Grasse, manufacture synthetic perfumes, and within recent years have enormously developed the perfumery side of their business—rivalling the French in the beauty of their productions. They have also acquired the business of Potter & Moore, Mitcham, and keep up that name in the "Fragrant old English Lavender Water," while they also have farms at Mitcham for lavender, peppermint, and other essence-yielding herbs. Since the lamentable death of Baron de Bush his brother, Mr. James M. Bush, has acted as managing director of the company, and Mr. Alfred W. Bush is also a director. Mr. Alexander Bush died a year ago. The company have branches in Paris, Moscow, Australia, and elsewhere, and the business which they founded in the United States is incorporated there.

Aerated-water Materials.

The occurrence in the first number of three "Condy" advertisements may be regarded as evidence of the friendly relations with Mr. Henry Bollmann Condy had with Messrs. Morgan Bros., his neighbours in Battersea and City agents. First we have on p. xvi the announcement of C. Foot & Co., chemical-manufacturers, and of Condy's concentrated pure malt vinegar; on p. xxiii is a quarter-page about Condy's health powder and ozonised water, and the whole of p. xxiv is devoted to Condy's Fluid. The last is particularly interesting on account of the report through the India Office on 200 gals. of Condy's Fluid sent out to India in January 1858, and used by medical officers. The business of C. Foot & Co. was established at Battersea in 1816 by Dr. Bollmann, a Hungarian chemist, who in 1843 bequeathed it to Mr. Condy's mother, who was a daughter of Colonel Foot, of the Scots Greys. Mrs. Condy carried on the business until her son had completed his education at the Royal College of Chemistry. When he went finally to Battersea, Mr. Condy found the firm of C. Foot & Co. manufacturing various qualities of acetic acid, practically all the acetates, most of the mineral acids, albumen, and a great many other chemicals and pharmaceutical preparations. He was a born experimenter, and remained so until the end of his life. Among his discoveries was one for improvements in the quick production of malt vinegar, especially the concentrated kind mentioned in the advertisement, which in 1859 had a world-wide reputation, and was largely exported to Australia, New Zealand and India. "No. 22" was the favourite strength. Mr. Condy's most notable discoveries were in respect to the manufacture and production of the various manganates and permanganates, which he "introduced as hygienic agents into commerce"—to use the words of Daniel Hanbury in reporting on the International Exhibition of 1862, and at the same time Professor Hofmann, in his report on the chemical products of the Exhibition, paid his former pupil a high compliment by referring to "Condy" in detail. The idea of attaching his own name to the new deodoriser and disinfectant was evolved in a conversation between Mr. Condy and Mr. Edward Vaughan Morgan some months after its introduction, when Mr. Morgan suggested that "Condy's Fluid" would be a more valuable name for the article, and it was at once adopted. In the 'sixties the business was carried on as H. Bollmann Condy, which it remained until 1870, when the late Dr.

Condy's Preparations.

Mitchell joined Mr. Condy in partnership, the trading name becoming Bollmann Condy & Co. At the same time Mr. Condy's son, Mr. H. J. Bollmann Condy, entered the business. The firm then opened their first City office in Billiter Street, E.C. Consequent on a dispute between the partners, Mr. Condy in October 1873 recommenced business on his own account, and Dr. Mitchell on his, but the dispute was ultimately settled amicably, and the businesses amalgamated in December 1883 as Condy & Mitchell, Ltd. The headquarters are, and have been for many years, at Condy's Fluid Works, Goswell Road, London, E.C. Mr. Condy, sen., retired in 1883 from active participation in the business, and lived at Folkestone until his death in September 1908. Like his son, Mr. H. J. Bollmann Condy, he was very fond of horses. When the factory was removed from Battersea the site was taken over by the Morgan Crucible Co., Ltd. Mr. H. J. Bollmann Condy has happy recollections of the Battersea days. Up to 1883 his father and family lived at Devonshire House, Battersea Square, which had been Colonel Foot's residence, and Mr. Condy has still in his possession a water-colour picture of the place, showing luxuriant verdure, and even the factory at that time had a very large and beautifully kept lawn. The history of this business may be regarded as typical of a section of British chemical industry during the past half-century. The beginning saw it devoted to the production of a multifarious series of chemicals; then specialities were struck which became more important than all the rest put together. Recognition of the possibilities of such things is the highest sense in modern business; Americans call it "picking out and pushing the leaders." Mr. H. J. Bollmann Condy had that sense, and in acting upon it the multifarious chemical products were one by one dropped as soon as they ceased to produce a reasonable profit. There are other examples of the same thing in our chemical industry, and when we contrast the great gain with the trivial loss we realise that this is not a sign of decadence.



MR. H. J. BOLLMANN CONDY.

Mr. Condy's hygienic inventions were among the first of a long series of efforts in deodorising and disinfecting, which have culminated during one half-century in Pasteur's discoveries of the *rôle* of germs in the causation of putrefaction, and Lister's antiseptic treatment, followed by more intimate study of disinfection. Another development of the half-century is illustrated in the following advertisement on p. ix of our first number:

Pearl-coated Pills.

Cox's Tasteless Antibilious Pills,

PATENTED COATING.

Agents wanted. Proprietary articles taken in exchange, and introduced to a fashionable connexion. Cox, Chemist, Brighton.

In 1859 Mr. Arthur Hawker Cox was in business at Ship Street, Brighton, and was in his forty-sixth year. He had been apprenticed to his uncle, Mr. Perrin, of Northampton, after which he was an assistant with Mr. Charles Dinneford, New Bond Street, London, and started in business in Brighton on June 14, 1839. At that time pills were made elegant by coating them with gold or silver leaf. French pharmacy usually gets the credit of having introduced gelatin-coating, but William Palmer, an Englishman, was before the French, he having obtained in 1842 his first patent to cover his process of applying gelatin to pills. This was overlooked, and books of the period do not mention Palmer, but attribute the process to the French. Sugar-coating was also used in the 'forties. Pill-coating was a subject in which Mr. A. H. Cox experimented for some years; but it was not until April 1854 that he sought provisional protection for the coating of pills and boluses with a gum or resin insoluble in water, but acted on by the stomach, an elegant appearance being imparted to them by powdered French chalk or other powder. This was the introduction of his system, and Mr. Cox's patent, engrossed on a large sheet of parchment with pendent official seal, is still treasured by his successors, as also is a small case containing a gross of the first pills which were ever pearl-coated. Part of the process was secret, and this is still jealously guarded. Mr. Cox became an Alderman of Brighton, and was three times Mayor of the town. His pill-business grew beyond the facilities of the Ship Street premises, and in 1871 he erected a factory in St. Martin's Place. In 1889, Mr. Cox "commenced retiring," by handing the control of affairs over to his two sons—Mr. Arthur H. Cox and Mr. Edward E. Cox; but it was not until his death on April 6, 1905, that he ceased to be active in the business. After that date the business was formed into a limited company, for family reasons, and the shares are still in the hands of the Cox family, who conduct the business personally; Mr. Arthur H. Cox and Mr. Edward E. Cox being joint managing directors, and, as our readers are aware, they are among the most enterprising men in the British drug-trade.

The next in alphabetical order of the firms who advertised in our first number and are still advertising in the *C. & D.* are Messrs. Ford, Shapland & Co. (p. vii), whose business was founded in 1842 by Mr. Ford at Russell Court, London, W.C., who subsequently took Mr. Shapland into partnership, and they removed to 6 Whetstone Park, Lincoln's Inn Fields, and Tichborne Court, High Holborn, London, and the business is still there under the designation to which it was changed—6 Great Turnstile, High Holborn—a quarter of a century since. Mr. Ford and Mr. Shapland continued the business together until Mr. Ford's death in 1881, when Mr. Shapland disposed of it to Mr. Richard Jackson and Mr. Mark Cann Heywood. A few years later the proprietors obtained a new lease of the site, and built handsome and modern printing works and warehouses upon it. Mr. Heywood died in June 1906, leaving Mr. Jackson the sole proprietor, but a son of Mr. Heywood is connected with the business, which is substantially on the same lines as fifty years ago—chemists' printing and stationery.

Fifty years ago annatto was the only colour available for tinting butter and cheese, and although it now has rivals it still holds a high place as a harmless colouring. The product was represented in our advertisement pages on September 15, 1859, by the announcement of Messrs. Edward Fullwood & Co., Warwick, a business now incorporated with that of Messrs. Fullwood & Bland, annatto,

Butter-colouring.

rennet, and butter-colouring manufacturers, Hoxton. This business was established in 1785, the works being situated in Walbrook, E.C., at the side of the Mansion House. In 1800 they were removed to No. 1 Old Street, and in 1850 from there to the present premises, 31 Bevenden Street, Hoxton, N., so that the firm have now occupied the same works for about eighty years. During the last few years the business has made rapid strides, especially since 1890. Messrs. Fullwood & Bland claim to be the largest manufacturers of annatto in the world, and last season they sold sufficient rennet to make 35,000 tons of cheese. Besides absorbing the Warwick business, the firm have also purchased the following old-established annatto businesses and amalgamated them with their own—viz., Michell's, Nicholl's, Walton's, Freeman's, and Ison's.

Bottles.

Revolutionary changes have taken place in the bottle-making industry during the past fifty years. Some English makers have come and gone, others, old-established have gone or have been merged into other concerns, while Continental manufacturers have been competing more and more in our home and Colonial markets. Amid all this change it is a remarkable fact that one bottle-manufacturer and merchant who drafted and inserted an advertisement in our first issue has done the same for this one; we refer to Mr. I. Isaacs, of Messrs. I. Isaacs & Co., 106 Midland Road, St. Pancras, London. He only claims, in present advertisements, to be established fifty years, but that is personal modesty. His grandfather, Mr. Isaac Isaacs, commenced business as a bottle manufacturer and merchant in 1789, and the business, as far back as Mr. Isaacs can recollect, was in Francis Street, off Tottenham Court Road. There the founder was in time joined in partnership by his son, Mr. Solomon Isaacs, and the firm-name became Isaacs & Son. Mr. S. Isaacs' son, the present owner of the business, began to work in it as a lad in 1853, and had the management of it when the *C. & D.* started. Mr. Solomon Isaacs died in 1861. He had a brother who was also in the bottle-trade, but his business was ultimately purchased by Mr. I. Isaacs, who thereupon changed the firm-name to I. Isaacs & Co. The business was carried on in Francis Street until twelve years ago, when the site of the premises was required for a nurses' home, and Mr. Isaacs removed the offices and warehouse to 106 Midland Road, his stores being at the Midland Railway Goods Depôt, St. Pancras. Medicine-phials and dispensing-bottles are Mr. Isaacs' speciality, and, besides his old-established connection with chemists, he has a big business with medical men.

Pharmaceutical Chemicals.

"Garden Wharf, Battersea, London, S.W.," has been familiar to readers of the *C. & D.* since September 15, 1859, as the address of Messrs. May & Baker, manufacturing chemists. Their works were and still are beside those of the Crucible Co. already referred to. The chemicals which they advertised in the first issue form a particularly interesting list, for after fifty years they are, with one or two exceptions, still in every-day demand, and the name of May & Baker is honourably associated in their production. The list is as follows:

Acid. Benzoic.	Argenti Nitras
Acid. Nitric.	Bismuth. Nitras
Antim. Crocus	Camphor Ang. Purif.
Antim. Murias	Cheltenham Salt
Antim. Oxysulphuretum	Creta Præcip.
Antim. Potassio-Tart.	Hydrarg. Ammonio-Chlor.
	Hydrarg. Bichlorid.
Hydrarg. Chloridum.	Liquor Vol. C. C.
Hydrarg. Cum Creta	Magnesia Calc. Pond.
Hydrarg. Nitrico Oxydum	Magnesiæ Carb. Pond.
Hydrarg. Sulphas	Potassæ Acetas
Hydrarg. Sulph. c. Sulph.	Potassii Cyanidum
Liquor Ammon. Fortissim.	Sp. Æther. Nitr. Sp. Gr. 850
Liquor Calcis Chlor. Fort.	Sp. Ammoniæ Arom.
Liquor Magnes. Bicarb.	Sulphur Præcip. Ver.
Liquor Sodæ Chlor.	Ung. Hydr. Fort.
	Zinci Acetas
	Zinci Chlorid.
	Zinci Oxydum
	Zinci Sulphas Purif.

At the time of our first issue Mr. John May and Mr. William Garrad Baker had been in partnership together for upwards of twenty years under the style of "May & Baker," the business having been originally started by Mr. John May and Messrs. Pickett and Grimwade in 1834. They continued to work together in the manufacture of pure and technical chemicals until 1876, when Mr. May retired from the firm. In the same year a new partnership was created, and Mr. W. G. Baker was joined by Mr. R. C. Heath, solicitor, of Warwick, and his stepson, Mr. W. E. B. Blenkinsop, and Mr. Thomas Tyrer, who continued the business under the old name of "May & Baker" until 1890, when Mr. Tyrer retired and the business was formed into a limited liability company, with Mr. R. C. Heath (chairman), Mr. John May, and Mr. W. G. Baker, directors, and Mr. W. E. B. Blenkinsop, managing director. In 1893 Mr. John May died from an attack of pneumonia, and Mr. J. A. Barnicott and Mr. H. W. Smith were elected to the board in 1896, with Mr. W. G. Hyde as secretary. In 1902 Mr. W. G. Baker died. In 1905 Mr. W. R. B. Blenkinsop, elder son of the managing director, who had been associated with the business for some years, was elected a director of the company. In 1906 Mr. J. A. Barnicott ceased to be a director, and at the present time the officers of the company are Mr. R. C. Heath (chairman), Mr. W. E. B. Blenkinsop (managing director), and Mr. W. R. B. Blenkinsop, director, with Mr. W. G. Hyde, secretary. We may add that Mr. R. C. Heath, on joining Mr. Baker in 1876, bought up the existing freehold of the factory and greatly added to it by acquiring neighbouring property and obtaining permission from the Thames Conservancy to form an embankment extending the property on to the river shore.

"Patents."

"The rubbish of one generation is the treasure of the next. What is passing unheeded to-day will be the material for history to-morrow." So writes Mr. Arthur Le Blanc Newbery in a foreword to "The Newberys in Six Generations: their likenesses and 300 years before," a delightfully reminiscent brochure which he has in the press, and of which he has been good enough to give us an advance proof. When his firm, F. Newbery & Sons, commenced to advertise in the *C. & D.* of September 15, 1859, they were at 45 St. Paul's Churchyard, London, and had been established 113 years. They had three advertisements in the issue: (1) the original (Gell's) Dalby's Carminative on p. xxx, (2) a card on p. xl, which intimated that they were "retail, wholesale, and export medicine-vendors," and (3) the genuine Dr. James' Fever Powder, to which was added Newbery's cod-liver-oil cakes. The argument in the last of these regarding numerous imitations of Dr. James' powder, "which has been prescribed by the medical profession for upwards of a century" (now upwards of a century and a half), bears repetition. It is—

These imitations are of comparatively recent introduction (A.D. 1839), and are advertised as "*identical*"; but when it is seen that these *so-called* identical articles are identical in extreme dose (viz. 6 grs.) with the Pulvis Antimonialis of the Pharmacopœia, it is sufficient to show how different the preparation must be to

ours, which is given in doses of 16 *grains and upwards*. If, therefore, a preparation is used of which the maximum dose is 6 grains instead of 16, it is evident a prescription so dispensed cannot possess that accuracy which it is the boast of the trade to study and practise.

It is not many weeks since we met Mr. Arthur Newbery fresh from making a batch of Dr. James' Powder. The story of the house of Newbery has been told more than once in the *C. & D.* during the past fifty years, and we fancy that the five-page article in our issue of April 15, 1874, entitled "The Messrs. Newbery," is one of the most liberally quoted and frequently stolen pieces of pharmaceutical history that exist. We now cull from it the portraits here given, which formed VIII. of "The Chemist and Druggist Portrait Gallery," a full-page wood engraving by Butterworth & Heath.



These brothers have matured during the five-and-thirty years since the above portraits were made, but are still as youthful in sympathy with their fellows and as devoted to business as they were then. The elder brother's brochure takes us back in the history of the family to 1559, when the baptism of "Willim Newberry, fil. Willim" was recorded in the parish registers at Waltham St. Lawrence, near Reading. There is a still earlier record, one Rafe [Ralph] Newbery having been a publisher in Fleet Street, London, in 1537, but for our present purpose John Newbery is the ancestor who most interests us. He was born at Waltham St. Lawrence in 1713, and his connection with publishing seems to have commenced at Reading in 1737, when William Carnan, the proprietor and editor of the "Reading Mercury" and "Oxford Gazette," left all his property to his brother and to John Newbery, appointing them his executors. John began to pay his addresses to Mrs. Carnan, the widow, married her, and in 1743 their youngest child, Francis Newbery, was born. In the same year John Newbery entered into a contract with John Hooper, surgeon, of Reading (whose pills are still in vogue), with a view to aiding and developing his business as bookseller, publisher, and medicine-vendor (then a familiar combination). A more momentous contract was signed by Newbery on May 25, 1745, his co-signatory being Dr. Robert James, of Bruton Street, London, inventor of the fever powder, and this contract involved the foundation of a branch of the business in London. And now we must trace the history of the business by parallel columns, showing the years, persons and places—the persons being the heads of the concern; and a few other notable data are added. It may be that some would like the facts more in detail, and these will be found in the brochure referred to, which Mr. Arthur Newbery will publish shortly.

	Persons.	Places and other Data.
1737	John Newbery	Reading.
1745 6	,, ,,	Corner of Ludgate Hill and St. Paul's Churchyard, London.
1759	,, ,,	Published on January 12 the first number of the "Public Ledger."
1765	,, ,,	Published "Goody Two-Shoes," by Oliver Goldsmith.
1767	,, ,, ...	Died, December 22.
,,	Francis Newbery	Succeeded to the business.
1770	,, ,,	Married Mary Raikes, sister of the founder of Sunday schools.
1779	,, ,,	Business removed to 45 St. Paul's Churchyard, a fine house (business and residence) built by himself.
1795	,, ,,	High Sheriff of Sussex.
1818	,, ,,	Died.
,,	Colonel John Newbery William Newbery	Eldest and second sons of F. Newbery succeeded to the business, and the firm-name became F. Newbery & Sons.
1830	Colonel John Newbery	Married as his second wife Fanny, elder daughter of Colonel Henry Le Blanc.
1834	Arthur Le Blanc Newbery	Born.
1837	Lionel Newbery	Born.
1853	A. L. Newbery ...	In Melbourne, Australia.
1854	Colonel John Newbery	Died.
,,	Lionel Newbery	Continued the business.
1858	A. L. Newbery	Returned from Australia to assist his brother in the business.
1867	Arthur and Lionel Newbery	Married two sisters, the daughters of Mr. White, Aylesbury.
1869	,, ,,	Removed the business from No. 45 St. Paul's Churchyard to premises double the size next door—No. 44.
1872	,, ,,	Removed to Newgate Street.
1882	,, ,,	Removed to King Edward Street.
1888	Francis R Le Blanc Newbery	Son of Mr. Lionel Newbery entered the business.
1899	,, ,,	Removed to 27 and 28 Charterhouse Square and 44 Charterhouse Street, where the business still is.
,,	Percy Le Blanc Newbery	Son of Mr. A. L. Newbery entered the business.
1904	Francis Newbery & Sons, Ltd.	Company registered, with 25,000*l.* capital. First directors, A. L. Newbery, L. Newbery, F. R. L. Newbery, P. L. Newbery, Miss L. G. Newbery, and E. Pickering.

This record is unique in the annals of the British drug-trade, especially in respect to the fact that there has been a Newbery in the business since it was founded in the eighteenth century. Now we are in the twentieth, and although "patents" have long ceased to be profitable (even wholesaling them)—to the extent of riches, at least—the Messrs. Newbery's catalogue is the biggest in the world, and to "patents" they have added a multitude of druggists' sundries and other goods handled by chemists. Once, when writing about trade advertising (catalogue for 1878), the firm said:

Trade Advertising.

> For this purpose we think no journal has been more increasingly appreciated during the twenty years of its publication than THE CHEMIST AND DRUGGIST. Less scientifically abstruse, perhaps, in character than many of its contemporaries, an examination of its pages will show how largely it is employed by proprietors for bringing before the trade information respecting their goods.

That opinion the Messrs. Newbery addressed to medicine-manufacturers; they more than endorsed it in a letter reproduced in "What Others Say of Us," and they have continued endorsing it to the present time by the best of

all the tributes to the value of an advertising-medium—constant and liberal use of it.

Transfer Agency.

The prominent position which Mr. Orridge, transfer agent, referee, and chemists' valuer, obtained for his advertisement in the first number (p. xii, opposite the first literary page) is a good parallel to the position of the firm's advertisement in the *C. & D.* of to-day—the front page of the Coloured Supplement. Benjamin Brogden Orridge, the founder of this business, was born in Malta in 1814, his father holding at the time an official position in the island. Returning to England a few years later, Mr. Orridge, sen., became governor of the county gaol at Oakham, and the son was educated at Oakham Grammar School, afterwards being apprenticed to his uncle, a chemist, at Colchester. When he reached manhood he removed to London, and was for a time dispenser to the Marylebone Infirmary, eventually going into business as a chemist at Deptford. He was appointed "Chemist to the Queen," the warrant being dated June 24, 1841. Mr. Orridge was one of the founders of the Pharmaceutical Society, and from 1864 served for some years



Councillor B. B. Orridge.

on the Council. He was one of the broader-minded Councillors who supported the United Society suggestion for placing the Benevolent Fund on the present "all-chemists" basis. The date of the establishment of the well-known transfer agency is somewhere in the 'forties. We find that Mr. Orridge advertised in the "Pharmaceutical Times" in 1846, when he was a "chemist of twenty years' standing," the business being at that time, as in 1859, situated in Bucklersbury. In 1865 Mr. Orridge was elected a representative of the Ward of Cheap on the Common Council of the Corporation of London, and was at once appointed to the Library Committee, of which he was Chairman in 1868. When he retired from the Common Council in 1869 he was presented with an illuminated address which testified to

his services as Chairman of the Library Committee; to his obtaining the compilation of a catalogue of the works of art belonging to the Corporation; to his efforts to promote the publication of "Riley's Memorials of London" from the Guildhall records; to the success he achieved in inducing the Court of Common Council to direct a searching investigation to be made into the official records of the City of London, and in obtaining the restoration of many important documents of municipal and national interest formerly abstracted from the muniment room of the Corporation; to his historical and archæological researches; to his establishing the fact that Puritan family connections of the immortal Shakespere were resident in Bucklersbury for nearly a century after his decease.

From this it will be gathered that Mr. Orridge had tastes which well fitted him for his position on the Library Committee. He died in 1870, an obituary notice being given in the *C. & D.*, August 15, 1870. Mr. Orridge's successors have well maintained the reputation of this agency, the valuable records and wide connection placing them in a unique position to arrive at the true value of businesses.

Popular Medicine.

"Powell's Balsam of Aniseed" was advertised on p. xxxii of our first issue. At that time Mr. Thomas Powell, the originator and proprietor of it, was in business at 16 Blackfriars Road, London, where he had been since 1824, and there he was when he was joined by his son, Mr. William Powell, to whom the remarkable development of the business is chiefly due. Powell's Balsam is, among leading proprietary medicines, one of the oldest advertised, and the present proprietors (Thomas Powell, Ltd., of which the managing director is Mr. Fredk. Wm. Powell, pharmacist, a son of Mr. William Powell) have in their possession a copy of "Bell's Messenger" of November 28, 1828, in which it was advertised. The business grew with the world's knowledge of the virtues of Powell's Balsam, and in 1886 it was transferred to the present commanding premises, 1 Albion Place, Blackfriars Bridge.



Mr. W. Powell.

Lint and Boxes.

The title given to this paragraph indicates merely the beginning of a big business—that of Messrs. Robinson & Sons, Ltd., Wheat Bridge Mills, Chesterfield. In September 1859, when John B. Robinson & Son, Brampton, near Chesterfield, first advertised lint and willow and paper pill-boxes in The Chemist and Druggist, the firm consisted of Mr. J. B. Robinson and his son Mr. William Bradbury Robinson. Mr. J. B. Robinson was a chemist and druggist in Chesterfield when he commenced the box-making business in 1839. Then he employed seven hands. Ten years later the number was seven times seven. In 1854 Mr. Robinson did two notable things—took his son William into partnership and commenced to make lint, the cloth for the latter being bought in Manchester; afterwards in a very small way weaving was commenced, and when this had grown sufficiently large the firm began to spin their own yarns and also established bleaching-plant. By 1859 they were employing ninety hands, and had established a London depôt at 17 Bouverie Street (it is now at 55 Fann Street, Aldersgate Street, E.C.). In 1869 Mr. Charles Portland Robinson became a partner, and there was no other personal change (except the death of the founder) until October 25, 1893, when the business was converted, for family reasons, into a limited company, with a

capital of 75,000*l.*, the first directors being Mr. W. B. Robinson, sen., Mr. C. P. Robinson, and Mr. W. B. Robinson, jun., with Mr. C. W. Robinson as secretary, and he became a director this year. At present the company has 1,333 employés, the business having developed enormously, for the directors have kept pace with hospital and surgical requirements (immeasurably expanded owing to antiseptic surgery) as well as public demands. Thus in 1879 Messrs. Robinson commenced to manufacture absorbent cotton wool; Gamgee tissue was added in 1885; they made sanitary towels for ladies (in woven tubes) in 1884, and in 1897 introduced the "Mene" sanitary towels. Gamgee tissue in woven tubes was made by them in 1904. They were the inventors and first makers of woven tubes for sanitary towels and of Gamgee tissue in tubes. In consequence of the growth of their surgical-dressing and sanitary-towel department three factories have been added from time to time—Cannon Mill, Griffin Mill (for surgical dressings), and Walton Works, for cotton wool and ladies' sanitary towels. The box-making part of the business has also greatly developed. It commenced in 1839 with pill and other round boxes, to which were added square boxes, so that the cardboard-box department at Wheat Bridge Mills has been many times enlarged, and it became necessary in 1884 to purchase Holme Brook Works for the square-box department alone. This has increased many times since that date. Letterpress printing was commenced in 1892 and lithograph printing in 1901. The firm also line and enamel their own boards at these works. Mr. J. B. Robinson, a grandson of the founder, is manager of the square-box factory, and Mr. P. M. Robinson is manager of the letterpress and litho department and folding-box department.

Perhaps these notes do not exhaust all that could be said regarding the advertisers of 1859 who are advertisers to-day. The small advertisements in the First Number seem to us to be capable of yielding much reminiscence, but it is not necessary for us to write about every thought that the number calls up, as the pleasure of glancing through the old pages largely resides in these thoughts.

VETERAN READERS.

These chapters in the history of THE CHEMIST AND DRUGGIST would be incomplete without reference to some of the chemists who have been familiar with it since the beginning, or who confess to having subscribed to it from then. The youngest man in this category that we know of is Mr. Fred. W. Fletcher, of Messrs. Fletcher, Fletcher & Co., who a few weeks ago, on the occasion of a dinner to his staff, produced the first volume of the *C. & D.*, with the remark, "I remember the first number coming into my father's pharmacy, and I have not missed a number since." It was some years before he went to the School of Pharmacy that Mr. Fletcher began to carry off our Corner for Students prizes, and later he became a valued contributor and critic. But we do not count Mr. Fletcher a veteran: it may be time to call upon him for reminiscences when our Diamond Jubilee comes round.

During the past few months we have received from many valued friends in pharmacy notes of congratulation. Some who were in the business fifty years ago have told us of the influence which the *C. & D.* had upon them in their youth, and how they have accumulated the volumes or numbers year by year. We do not propose to repeat all the nice things that have been said of the *C. & D.*, but we feel that the younger race of readers will be glad to know something about a few of these veterans.

There are not many registered chemists and druggists who have passed their ninetieth birthday. Mr. Joseph Albright, of Parkfield Terrace, Lancaster, celebrated his ninety third in January last. He is no longer in business, but looks back to it with happy recollections, and he believes he owes his length of years to his maxim "Don't worry: turn the handle of life smoothly if you wish to live." Mr. Albright's father was a sailcloth-manufacturer in St. Leonardgate, Lancaster, and there our nonagenarian was born on January 23, 1816. His first experience of school life was at "Sandy Johnnie's," a nickname given to an old-fashioned master, whose economical educational establishment would have been closured by the Board of Education to-day. He spread a layer of damp sand over tables, and taught his pupils to write with a pencil in the sand! As the son of a Quaker, Mr. Albright proceeded to the Ackworth School, near Pontefract, his journeys to and from Yorkshire being made by stage-coach. Four or five years in this historic boarding-school improved his education, but his decision to become a chemist and druggist rendered it necessary for him to take a course or two of Latin with a clergyman named Waterwith. Then it was decided to apprentice him to Mr. Sims, a druggist in Lower Hillgate, Stockport.

Joseph Albright.



MR. J. ALBRIGHT.

"I suppose you had to pay more attention to work than to study in your apprenticeship days?" queried the *C. & D.* representative at a recent interview.

"Yes," replied Mr. Albright; "we knew more about work than anything else."

"Had you to pass any examinations?"—"They didn't bother so much about qualifications then. People could sell drugs if they liked. So long as they did not poison people, nobody found fault."

"How long did your apprenticeship last?"—"Till I was twenty-one."

"You would know something about the living-in system?"—"Yes, I lived in. We opened the shop at 8 A.M., and worked away till 9 P.M. from Monday to Friday. Then on Saturday we were kept at it till 11.30 P.M."

"With meals in, too?"—"Yes."

"How did you fare in that respect?"—"Oh, we fared well. It was satisfying."

"How much holiday did they allow you?"—"None, excepting a day on Good Friday. We kept the shutters up, and one of us had to stay in then."

"Surely you had a few trips to Manchester?"—"If you wanted a cheap trip to Manchester you were at liberty to get up at four o'clock in the morning and walk to Manchester, and back again to breakfast. I did that several times. It was seven miles each way, and good for the appetite and the constitution."

On completing his apprenticeship Mr. Albright was for about two years assistant in a shop at Hanley, Staffordshire. He returned to Lancaster in 1840 and commenced business as a chemist and druggist in Lower Church Street. Succeeding by careful attention to business, he found it necessary to go into a larger shop in Market Square, where an open market of some importance was conducted. His

last removal was to premises in Penny Street at the corner of ffrances Passage, now occupied by Mr. Wm. Arkle. These were enlarged for Mr. Albright, who combined dentistry with pharmacy.

"Then you were a painless tooth-drawer?" exclaimed our representative. The old gentleman chuckled, and his eyes sparkled as he said, "Yes. I remember once a farmer driving up to the shop-door and shouting to me. I asked him what he wanted, and he said, 'Come and pull this tooth out.' He wouldn't leave the young horse in the street, so I mounted the cart and drew out his cruncher and handed it to him."

Mr. Albright remembers when candles were superseded by oil-lamps. Fish oil was used to light the streets. Then shale oil was brought from Scotland. He heard good accounts of paraffin oil, and had a barrel sent from Liverpool. For advertising-purposes he lighted a lamp in his shop-window, but noticed that instead of attracting people they seemed to give his shop a wide berth. He inquired into the cause, and was informed that the shale-oil man had warned people to keep away from the shop, as there was certain to be an explosion, and they might be blown to atoms. "People got a little confidence after a few days," said Mr. Albright, "and trade in paraffin was brisk. The same things were said when gas was first introduced to the town. They imagined that if a match was applied to the gas it might run along the pipes and cause an explosion at the gasworks. Now I have lived to see electricity used instead of gas. From penny dips to electric lamps is a long way, but I've travelled it. Methods of travel have been as varied. I have gone by stage-coach, packet-boat on the canal, railway train, electric car, and motor-car." Mr. Albright only allowed himself a week's holiday each year, invariably going to the Lake District.

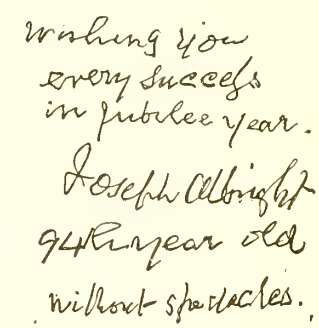
The methods of trading were very primitive in the old days. A man would come into the shop and say, "I want sixpennyworth of that," pointing to the particular bottle or jar. On one occasion Mr. Albright had temporarily left an errand-boy in the place with instructions to ask any customer to wait. While he was out a man came in and said, "I want twopennyworth of tincture of rhubarb." The lad said he did not know which bottle it was in. The customer said he could tell it, and selected the bottle, ordering the boy to pour him some out. The man drank from the wineglass, paid his twopence, and departed. Immediately afterwards Mr. Albright entered the shop, and the boy told him what had transpired, pointing out the bottle which had suited the customer's fancy. It was tr. opii!

"The bellman was near," continued the nonagenarian, "and I told him to give notice to the people that a man had taken something instead of tincture of rhubarb at Albright's. I traced him across the river to Skerton, and the late Dr. Christopher Johnson used the stomach-pump at the Old Dispensary. Some men walked him about for an hour, and his life was saved."

"Did you retire before they began to be particular about the sale of poisons?" the *C. & D.* representative asked. "Yes," was the reply, "forty years ago."

One of his assistants, Mr. Cuthbert, is still in business in North Road, Lancaster, at the age of sixty-eight. Mr. Arkle, to whom he sold his business, is the President of the Lancaster Chemists' Association. Mr. Albright was delighted to receive a kindly remembrance from the Association at their last annual dinner.

His interest in pharmacy was evident from the fact that The Chemist and Druggist was among the periodicals and books by his side. He expressed his interest in our Jubilee, and wrote the following message on a half-sheet of notepaper:



Asked for the secret of his longevity, Mr. Albright said, "Well, I've always lived a temperate life, and I resided in the country for a time. I've lived here contented for twenty-five years. My advice to young men is 'Stick to business if you want to get on. Don't always be thinking of the next entertainment or game. Perseverance and sobriety will win the day.'"

"Despite the competition of multiple shops?"—"Well, there were none in my time, but there was plenty of competition. Relations are better now, with an association binding all the chemists together."

Mr. Edward Johnson, of Messrs. Bourne, Johnson & Latimer, druggists' sundriesmen, 34 and 35 Furnival Street, Holborn, London, E.C., has been in the business fifty-five years, and this is the golden year of his married life. Each has brought increasing happiness to him, for Mr. Johnson is no pessimist. The firm with which he is connected was established in 1850 as Bourne & Taylor. It was through Mr. Taylor that he went into the business; they were co-workers in the Sunday school (Mr. Johnson for thirty-five years has been superintendent of the Sunday school at Spurgeon's Tabernacle). Mr. Taylor died in 1873 and Mr. Bourne two years later. Now Mr. Johnson has three sons associated with him in the business as well as Mr. Latimer. When he began in the druggists' sundries three M's were the leaders—Maws, Morgans, and Mather. The O'Connell feeding-bottle (Kearney's patent) was the leader in that line; it sold at 7*s.* 6*d.* and more.



Mr. E. Johnson.

Mr. Johnson's firm introduced a bottle which retailed at 2*s.* 6*d.*, and that for years was the only kind; to-day they have twenty patterns and no fewer than eighty-one kinds of soothers. "Children rule nowadays," Mr. Johnson remarked, "and there is an insatiable desire for novelties that changes the aspect of the trade from year to year." Glancing over the advertisement-pages of our first number, and coming to p. xlvii (Horsey's Pouch), he smiled as an incident of his early warehouse days came back to him. Horsey was a leading maker of teats fifty years ago, and the incident was the checking of an order which (as Mr.

Johnson heard it read out) sounded like this: "One dozen calves' teats, one dozen horses' teats, one dozen lambs' teats." Mr. Johnson has travelled in Kent for his house all the time of THE CHEMIST AND DRUGGIST, and he knows the ground and the chemists of the county, past and present, as well as any man living. We have asked him to jot down his recollections of the district, which we now give in his own words:

Fifty Years' Retrospect.

In trying to recall the names of chemists whom I have known and visited in some of the Kentish towns during the last half-century, feelings both of pleasure and sadness have been aroused. Many happy memories of pleasant interviews and lasting friendships crowd into the mind, and sadness comes with the knowledge that so many have passed away. Some of those now in business, on whom grey hairs are appearing, when in frocks used to stand on a stool and "help" their fathers in looking over my samples, and *their* children are now doing the same. In some cases the death of the proprietor has led to the closing of the business, but in others it has simply been a change of ownership. It is singular that in all towns it has been a succession from father to son, and in Dover four sons have succeeded their fathers and two (Hambrook and Forster) have been succeeded by son and grandson.

Dover

has witnessed many changes, and has had the honour of producing several prominent men in the pharmaceutical world, notably Hambrook and Alexander Bottle. Some of the Dover chemists have been chosen by the townspeople for municipal honours. Mr. Bottle was an Alderman for six years, Councillor three years, and was Mayor in 1879. Mr. Peake served as Alderman fourteen years, as Councillor seventeen years, and was Deputy Mayor twice. Mr. Hambrook served as Councillor for three years. Mr. W. J. Barnes was made a Magistrate, served as Councillor twenty-two years, and has just been re-elected for three years, making twenty-five years' service in the Municipality. Four times has he been Deputy Mayor, and he was elevated to the Mayoralty in 1901. Truly a unique record for a busy chemist.

The business changes in the town have been as follows, and I think they are correct in every particular:

Blackbourne, Snargate Street	Succeeded by Wilford.
Wilford (now of High Wycombe)	" " Wyles.
Wyles	" " Atkins.
Atkins	" " J. Corte.
J. Corte (now at Maidstone)	" " Dunsford.
Dunsford (now at Oxford)	" " Cartwright.
Alex. Bottle	" " Ewell.
Elkington, King Street	" " Paul.
Paul, " "	" " Thompson.
Thompson, " "	Removed and business closed.
Eastes, Cannon Street	Succeeded by son.
Eastes, jun., Cannon Street	" " Perkins.
Perkins, " "	" " Clarke.
Clarke, " "	Pulled down and closed.
Hambrook, Stroud Street	Succeeded by son.
Hambrook II. " "	" " son (Edward). (Three generations.)
Cotterill, Snargate Street	" " son.
Cotterill, jun., Snargate Street	" " Lewis Thompson.
Peake, New Bridge	" " Wyles.
Wyles " "	" " Long.
Long (in Canada)	" " Cuff.
Forster, Castle Street	" " son (Robert).
Forster, R., " "	" " son (George). (Three generations.)
Thomas, Pier	Business closed.
Bolton, King Street	" "
Thornton, Biggin Street	" "
Pearson, Buckland	" "
Peake, High Street	Succeeded by Hook.
Hook, " "	" " H. Adams.
H. Adams, High Street	Closed.
Ralph, High Street	Succeeded by son.
Robert Adams, Park Place	" " Stevens.
Stevens, " "	" " Barnes.
Barnes, " "	Closed.
Bishop Cannon Street	Succeeded by Timothy White.
Neale, Biggin Street	Removed to Market Square. Business closed.
Lewis Thompson, Folkestone Road	Succeeded by Grover.
W. J. Barnes	" " Cartwright.
Plank, London Road	" " Stevens.
Stevens, " "	" " Hall.
Hall (went abroad)	Closed.

J. F. Brown has a business in Cannon Street (removed from Market Square). Mr. Kay has a business in London Road. Timothy White, Ltd., have a second business in London Road, and the ubiquitous Boots have opened in Cannon Street. Mr. Cooke, formerly a chemist, entered the medical profession, and, after serving several times as Mayor, died in 1864. The chemists of Dover are now Messrs. E. Hambrook, G. Forster, Cartwright, Cuff, F. Grover, A. E. Kay, L. Thompson, Ewell, E. Thompson, J. F. Brown, Timothy White, and Boots, and all think they are quite sufficient in number to satisfy the needs of the inhabitants.

Maidstone

is a town for which I have a great veneration, it being the birthplace of the Rev. Newman Hall, whose father was connected with the "Maidstone Journal," and who now lies in the old churchyard, close by the grave of Thos. Hyde Hills, one of the Presidents of the Pharmaceutical Society. It also was the scene of C. H. Spurgeon's tutorship in St. Augustine's College. The town has seen many pharmaceutical changes. Some of the old businesses are closed entirely, but there remain Messrs. Oliver, Rowcroft, Jennings, Corfe, Payne & Filmer, Wells, and Goff. Boots, Ltd., are there also. In this town four sons have succeeded their fathers—Messrs. Oliver, F. Corfe, J. Corfe, and Anning. Mr. Oliver, sen., Gabriel's Hill, entered the medical profession and relinquished the business to his son Frederick, who has honourably filled the office of Mayor and has now been made a Justice of the Peace. His predecessor, Mr. Argles, also enjoyed municipal honour, and Mr. Fred Corfe is held in such high esteem by the Maidstonians that honours have been conferred upon him which he bears cheerfully, although I fear they are not accompanied by compensating remuneration. Mr. Anning relinquished the retail for the wholesale, and the neighbourhood round Maidstone is well worked by the wholesale departments of Messrs. Stonham, Corfe, and Anning. The changes in my time are thus indicated:

Holliday, Week Street	Closed.
Price, " "	"
Rogers, High Street	"
May, Week Street	Succeeded by Payne.
Cox, " "	" " Somerton.
Somerton, Week Street	" " Jennings.
Jennings, " "	Lease expired and closed.
Windle, " "	Succeeded by Ridley.
Ridley, " "	" " Anning.
Anning, " "	" " son.
Anning, jun., Week Street	Removed and closed.
Lines, High Street	Succeeded by Gilders.
Gilders, " "	Closed.
Bunker, " "	"
Cooper, " "	"
Simpson " "	Succeeded by Corfe
Corfe	Closed.
Lambert, Westboro'	Succeeded by Jennings.
Vinson, High Street	" " Filmer.
Evans, Tonbridge Road	" " Horrell.
Horrell, " "	" " Goff.
Rowcroft, Week Street	No change.
Vardon, Stone Street	Succeeded by Parrish.
Parrish, " "	" " Oliver.
Oliver, " "	" " Wells.
Mears, Bank Street	" " Argles.
Argles, " "	" " Argles and Stonham.
Stonham, " "	" " F. J. Oliver.
Oliver, sen., Gabriel's Hill	" " F. J. Oliver.
Kirk, " "	" " Corfe.
Corfe, " "	" " Fred Corfe and John Corfe.

Malling.

The quaint old town of Malling, close by, is catered for by Mr. Henry Oliver and Mr. Walter Stedman, both following in their fathers' steps. The Stedman family have been resident in the neighbourhood for many years, as a visit to the old churchyard will testify. The founder of the business in this town lived to a ripe old age and left two sons, one of whom had a business at Teynham which he relinquished for this. The other son, Arthur, took over a business at Snodland. Walter Stedman has a son who has just qualified, and who has an appointment at Rangoon. Another third generation chemist!

In Ashford

the changes have been few. Three sons have succeeded their fathers and a fourth is "coming on":

Farmer, Bank Street	Succeeded by Forth.
Forth, " "	" " Taylor.
Brothers, High Street	" " son.
Brothers, jun., High Street	" " Brothers & Reeve.
" "	" " F. Gutteridge.
White, High Street	" " son (Alfred).
Stedman, High Street	" " son (Frank).
Ramsey, " "	" " Ingall.

Walker & Harris have a business in Bank Street, and Mr. J. Smith ministers to the wants of the railway colony at South Ashford.

Folkestone,

when I first knew it, had but five chemists; now, following the expansion of the town, the number has increased, and most of them are of a high-class character. Competition is very keen here. Boots and Timothy White have each two

well-appointed shops. Folkestone has four ehemists who have sueeeeded their fathers, and one other has the pleasure of seeing his son climbing to the top of the tree of pharmaceutieal knowledge. Among the retired chemists Mr. E. Bishop is doing useful work in the Corporation, and Mr. Giles has the honour of aiding by his wise eounsels the work of the Free Library Committee. The ehanges are as follows:

Guest	Sueeeeded by Banks.
Banks	Lease expired and closed.
Harwood	Succeeded by Goodliffe.
Goodliffe	Closed business.
Hammon	Sueeeeded by Cadman.
Cadman (now of Wimbledon)	,, ,, Knight.
Knight	,, ,, son (Fred).
Knight (now of Devonport)	,, ,, Boots.
Bishop, Tontine Street	,, ,, Timothy White.
Bishop, Sandgate Road	,, ,, F. J. Curtis.
Brothers, Harbour Street	Closed.
Lea, ,, ,, ...	Sueeeeded by Ryley.
Ryley, ,, ,, ...	,, ,, Pilcher.
Lea, Tontine Street	,, ,, son (Fred).
,, ,, ...	,, ,, Hall & King.
Hall & King, Tontine Street	,, ,, Duncan.
Duncan ,, ,, ...	,, ,, Price.
Price ,, ,, ...	,, ,, Balmford.
Giles, Guildhall Street	,, ,, son.
Stainer, Sandgate Road...	,, ,, son (John).
S.E. Drug Co.	,, ,, Agar.
Agar	,, ,, Ransford.

Mr. Taylor has three shops—at Dover Road, Cheriton, and Blaek Bull Road. Mr. Giles and Mr. Goodliff opened shops in Dover Road and elosed them. Mr. James Mallinson has opened a first-elass pharmaey near Central Station. Hall & King stand alone in Bouverie Road, and Mr. J. Glover dispenses homeopathy in the High Street. Mr. Phillips is one of the retired chemists whom I cannot loeate. The chemists now in business in Folkestone are Messrs. Pilcher, Stainer (father and son), J. Balmford, J. Giles, J. Mallinson, Hall & King, Ransford, J. Glover, F. J. Curtis, and J. C. Taylor, besides the eompanies—Boots and T. White.

Mr. Johnson is still hale and hearty, and takes his journeys with regularity. We are pleased that our Jubilee Number is the means of his establishing a precedent for veteran Knights of the Road—viz., the recording of business changes in the towns which they visit. Generations are always growing up who are ignorant of the pharmaceutical past in their own towns, and we venture to say that there is no more interesting occupation for odd moments than jotting down such notes as Mr. Johnson has given us, and they would not have had the metallic journey through the linotype machines did we not consider them to be interesting to those who read them. We trust his example will be followed.



Mr. J. E. Eastman.

A Veteran Contributor.

In our business, as in others, some names are as familiar as household words. They come appended to expressions of opinion on the movements of the day, some crisis in the craft, or maybe a hint or note of advice to fellow-chemists, to whom the writer may not be known because a *nom de plume* often veils his identity, though not his wisdom. Among such we count Mr. J. E. Eastman, of Forest Lane, Stratford, E., who has been reading the *C. & D.* since the beginning and writing to it when the spirit has moved him. We have asked him to write of himself, and append his notes, which reflect the life of the London suburban pharmacist. The postal reminiscences are particularly interesting to chemists who are sub-postmasters:

I have only had two businesses—one at Tottenham, whieh I had for thirty-two years, and this one in Forest Lane, whieh I have had for sixteen years. For years before I went to Tottenham it was a stronghold of Quakerism, but it was gradually dying out. In my early days there we had a large Quaker sehool and a meeting-house, and the broad-brimmed hat of the Quaker and the peculiar bonnet of the Quakeress were a daily sight. About two years after I began business the Lower Tottenham Post Offiee was being moved, and I applied for it and obtained it. When the Post Office took over the telegraph, our offiee was made a telegraph office, and when I left I had had it more than twenty-nine years, and it is a post offiee and telegraph offiee still. When the Post Offiee first took the telegraph over they offered a sovereign to anyone sending and receiving a eertain number of words a minute, and I and my first apprentice were among the first who received it. In my early days there were several large houses near, standing in their own grounds, but, alas! few are standing now, and the onee beautiful grounds are eovered with bricks and mortar. In those days all letters had to be eounted and sorted inside, then put in a bag, which was tied and sealed. This was ealled for by mail-cart at stated times, and it was no uncommon thing on a winter's night for the driver to go by asleep, and, when pulled up, to have to retrace his steps, having missed ealling at two or more offices. I remember on one occasion when the eart pulled up for the one-o'eloek letters, a strange man was driving, and the driver was lying on the cart drunk. As I eould not give our bag to a strange man, I had to get one of the postmen to take charge of the eart and drive it to the Northern District Office, Islington. In those early days the only way to get to the City was by omnibuses, whieh ran from Edmonton (fare 9*d.*, and from Tottenham High Cross 6*d.*), or by the train from Park or Tottenham Stations to Bishopsgate. The other line from Enfield to Liverpool Street had not been made. In faet, Liverpool Street Station was not built for several years afterwards.

In those early days there was no P.A.T.A., for all "patents" were sold at face value. I forget what I paid for quinine when I began business, but I remember some years afterwards seeing an advertisement in The Chemist and Druggist offering 4 oz. for 1*l.*, and I thought it eheap and seeured it. On a Saturday night we often sold several "blue pills and black draughts" and always got 8*d.* for them. Hunyadi Janos water was 1*s.* 9*d.*, orange-and-quinine wine 2*s.* 6*d.*, and other things in proportion. How it makes my mouth water when I think of the old prices! "Boots" was, of eourse, an unknown quantity. The golden rule of "Doing unto others as you would that they should do to you" was more aeted on then than it is now, the motto of many now being "Never mind who sinks so long as I swim."

I have had a good many curious requests and replies in my time. I was once asked for a box of tamed Indians, and at another time for a draught for a dolt (adult). Asking for a powder for her little brother, I inquired of the sister his age, and received the reply, "I don't know, but he is going on for his next birthday." "Mother wants a pennyworth of powder," said a little girl; "she doesn't know the name, but she said if I told you it was white you'd know." Asked by a man for a box of pills, I said, "What size?" and reeeived the reply, "Oh, he's bigger and taller than me."

Mr. Eastman married two months after he commenced business, and has had nine children (how few chemists are so blessed nowadays!), eight of whom survive, along with their mother and father. Mr. Eastman knew Mr. Cyrus Buott. The next of our veterans was a local secretary to the United Society of Chemists and Druggists — Mr. John Averill, pharmaceutical chemist, of Stafford, whose interest in the trade movements of pharmacy has grown rather than abated with the years, as his comparatively recent occupancy of the presidency of the North Staffs Chemists' Association indicates. This is Mr. Averill's business jubilee year. He and his brother, Mr. H. A. Averill, pharmaceutical chemist, commenced business



Mr. J. Averill.

in partnership at Stafford in 1859, and they still carry it on at 10 Market Square under the trade-name J. & H. A. Averill. He remembers Mr. Cyrus Buott calling in regard to the United Society and his accepting the local secretaryship for the district in 1862, but he has no clear recollection of what took place in that connection except that "those were more profitable times than now." He adds :

From the Potteries.

The publication of THE CHEMIST AND DRUGGIST was considered a great boon, and each issue was welcomed on account of the vast amount of valuable information which it contained.

When Mr. Averill presided over the North Staffs Chemists' Association he on more than one occasion spoke publicly on the necessity for legislation to control company trading in pharmacy. On this subject he had the advantage of speaking as one who participated in the agitation which led up to the passing of the Pharmacy Act, 1868, and therefore was able to show how much at variance with intentions was the House of Lords' ruling in regard to companies. Mr. Averill has served his town in several capacities, and at present is a member of the local Education Committee.

Fifty-six Years in Business.

Among the notes which we received when it was announced that 1909 is our Jubilee year was one from Mr. John Craig, of Hawick, saying, "I have been a subscriber to the *C. & D.* from its first number." We are indebted to two of Mr. Craig's old apprentices for the following notes on his career :

Born in the early 'thirties at the farm of Braidley, Darvel, Ayrshire, which his father left soon after for Dunjop, Kirkcudbrightshire, Mr. Craig served his apprenticeship with Mr. Paterson, chemist, Castle Douglas, in the premises now occupied by Messrs. Paterson & Stewart. Leaving Castle Douglas at the end of his apprenticeship, he went to the Apothecaries' Hall, Glasgow, where he remained for two years. He began business in Hawick in 1855, and during the years that have since elapsed there has been no more familiar figure to drug travellers than that of Mr. Craig. About forty years ago he began to manufacture aërated waters, and this business, now and for many years the principal one of its kind in the South of Scotland, has been continued ever since. In this connection it may be remarked that when he took up aërated waters he introduced one of the silicated carbon filters which Messrs. Morgan Bros. manufactured for many years. Previous to that time he had met one of the brothers, who travelled for his firm. Mr. Craig was a subscriber to THE CHEMIST AND DRUGGIST from the first, and it was the event of the month, both to himself and to the apprentices, when the journal made its appearance. Great was the excitement when the *C. & D.* became a weekly. The present writer well remembers its Students' Corner and the problems that he struggled with thirty-five years ago. At that time there were few educational facilities offered to young men, but Mr. Craig had an excellent pharmaceutical library, and he encouraged the apprentices to study, so that long before our "time" was out we had made all the common gases and many chemicals, in addition, of course, to all the common B.P. galenicals, and thus laid a foundation more or less solid for future work. One of Mr. Craig's first apprentices was Mr. Robert McAdam, the present genial manager of the Glasgow Apothecaries' Co. Among others were Mr. T. J. S. Blaine, chemist, of Hawick and Ayr; Mr. Thomas Maben, of Parke, Davis & Co.; Mr. Walter Grieve, of Ismay & Sons, Newcastle-on-Tyne; Mr. George L. Scott, of the Birmingham and Midland College of Pharmacy; and Mr. D. C. Michie, now manager of Mr. Craig's drug-business.



MR. JOHN CRAIG.

Mr. Craig remembers one item of information in one of our early numbers; it was a hint that a good way to break a lump of alum is to drive a nail into it. He says that undoubtedly the *C. & D.* served a most useful purpose at its commencement, and has gone on with the years in becoming increasingly interesting and instructive. Mr. Craig is most progressive although one of the "old school." He does not believe in the "good old days," but says that pharmacy is much better nowadays than ever it was, and, in his opinion, it is entering on much better times. Prices may not be so good, but there is much more business and of a better kind.

Having crossed the Border we may continue our literary journey as far as Dingwall, where on March 3, 1859, Mr. Alexander McIver commenced his apprenticeship with Mr. P. J. Dewar. He remembers quite well the first number of the *C. & D.* reaching Mr. Dewar in September of that year. We may quote his own words in regard to it :



MR. MCIVER.

It would look very small now beside your Winter or Summer Issues, or even your weekly issue. During my five years' apprenticeship I saw it every month. I only saw it occasionally during next five years, but since 1868 I only missed one year. I felt like a fish out of water without it that year, and made up my mind never to miss it again. Indeed, I could not feel happy without it weekly now. Wishing the *C. & D.* long life.

At the end of his apprenticeship Mr. McIver was for about two years an assistant in Messrs. Duncan & Flockhart's pharmacy, 52 North Bridge, Edinburgh, and from there went to Messrs. Boileau & Boyd, Bride Street, Dublin. The pharmacy which he opened at Dingwall is at 8 High Street, and there Mr. McIver has made for himself a reputation as a pharmacist and man of business among the first in the North of Scotland.

The engraving of our *Diary* for 1871, which we print on a previous page, has been done from a copy sent to us by Mr. Frederick Jones, of West Allington, Bridport, who is in his eightieth year. He was in London until 1878, and there are some who may still recollect his genial features. Mr. Jones is modest about himself, for his letter to us simply says :



MR. F. JONES.

I have much pleasure in congratulating you upon the Jubilee of your journal, to which I have been a subscriber from its earliest issue, and always looked forward to its delivery as we now do the daily paper. You now give us the latest from the Colonies weekly as well as the latest home information respecting the trade generally. In fact, I consider it is *the best business trade journal* that is printed, and heartily wish you continued success with a long life of prosperity.

Among many other letters which we have received is one from a well-known veteran pharmacist that we venture to quote from. The writer does not desire publicity as to its origin, and although it is entirely pessimistic, we hasten to say that there has been nothing of the kind in the writer's pharmaceutical activity. He has been a Moses in work, though a Jeremiah in utterance :

I am considerably past the allotted age of man, and have long since ceased to care about what interested me very much in my early life, and that which once glowed with warmth and colour is now dim, dull, and indifferent to me. This is not wholly the result of age, but very largely that of a conviction that the "chemist"—*qua* chemist—is a creature of circumstances which make of him an abnormal being, deformed and compressed—like a Chinese lady's foot—into a condition of littleness from which it is hopeless to attempt his redemption. Therefore I have long lost interest in his doings. I have from time to time, and many times, preached what I conceived to be the truth which was essential to our well-being and the fallacies which are destructive of it, with the result that I have a lively conception of his dissatisfaction who of old time cried in the wilderness, so that a sickening sense of uselessness and hopelessness have made me retire into the unseen and unknown, and there I have practised what I preached, and have no reason to regret doing so. I will not—I cannot—do what the chemist of to-day lays himself out with all his energy to do. I will not willingly be the distributing agent of the advertiser. I have never advertised, I never lie on my labels, I have never wittingly sold a bad thing, and competition does not affect me to-day; while my business is larger—not much, but still a little larger—year by year.

We have ventured to quote these utterances because it is well that all sides should be represented in a review of fifty years. That British pharmacy is not what it was when The Chemist and Druggist first saw the light is self-evident : there is nothing what it was; but in shop-callings pharmacy is, probably, the most inclined to adhere to the past, and to make profit from the demands of the moment, the movements of the time. Some of the older race adhere to and revere the past ; others revere it without adhering to the older methods ; while the younger race who find themselves as pharmacists in an age of competitive business methods realise that to live they must adapt themselves to their environment.

The views of veterans which we have quoted, along with notes on their lives, may probably be supplemented by others, should they care to address us; but space prevents us going further on these lines in the present issue. The news of the week calls for attention, and to neglect that would make us unworthy of the good wishes which have been expressed. This remark, naturally, gives rise to the thought of the changes which have occurred in the composition of trade journals during the past fifty years, none of which is more remarkable than the rapidity with which the trade gets the news of what is going on. The Conference is an example of what we refer to. In 1863 the first meeting was held on September 2, and we reported it in the first issue after—September 15. For years subsequently the semi-official reports of the Conference took months to publish, and even division of a report into two weekly parts was considered a good thing twenty years ago. The occurrence of a Conference meeting in the same week as our Summer Issue was at one time considered a calamity to be avoided. The event occurs once more this week, and is accepted with equanimity, and our arrangements are such that the proceedings which have yet to take place (when this sheet is printed) will be reported by members of our staff at Newcastle, transmitted, and printed while the members of the Conference are dreaming of the Excursion they will take on Thursday. This treatment of practical and scientific matter as news was not possible a quarter of a century ago—neither methods nor readers were ripe for it.

Now, in a final paragraph, we desire to thank all who have written to us on this Jubilee event, and once more acknowledge our indebtedness to all in the manufacturing, retail, and wholesale sections of the business who in diverse ways have helped to bring The Chemist and Druggist to this stage of its career. In this expression we speak for everyone connected with 42 Cannon Street, from the senior partner to the youngest clerk, as an earnest of which we conclude with a photograph of them taken at Maidenhead on June 25, 1909, when the proprietors of this journal and "The Ironmonger" entertained their London and provincial staffs.



The names are (from left to right) : *Top Row*—Mr. Brett, Mr. Raper, Mr. Ridlington, Mr. F. L. Lesingham, Mr. Quin, Mr. Turner, Mr. Woolley, Mr. Whatmough, Mr. Jones, Mr. Corker, Mr. Williams, Mr. H. F. R. Lesingham, Mr. Kelly, Mr. Mitchell, Mr. Mills-Palmer, Mr. Bailey, Mr. Stainforth, and Mr. Chalmers. *Second Row*—Mr. Denham, Miss Bangs, Miss Brown, Mr. Howard, Mr. Schofield, Mr. Richards, Mr. Laing, Mr. Hyatt, Mr. Davis, Mr. Messent, Mr. Ettershank, Mr. Young, Mr. Clements, Mr. Anderson, Miss Shropshire, Miss Fairbairn, Miss Chorley, and Mr. Millington. *Third Row*—Mr. Came, Mr. Liddell, Miss Harrison, Miss Bowkett, Mr. Scorey, Miss Vickary, Miss Gillett, Miss Mills, Miss Moore, Miss Thomas, Miss Selby, Miss Courtney, Miss Hutt, Miss Goddard, Miss Eames, Miss Hulme, Miss Green, Miss Stark, Miss Edgcomb, Miss Sammons, Miss Hawkes, Miss Lenny, Miss Foreman, Miss Rattle, and Mr. Ashdown. *Fourth Row*—Mr. Remmett, Mr. A. C. Meyjes, Miss Dunand, Mr. Mays, Mr. Lovesy, Mr. P. Vaughan Morgan, Mr. E. Vaughan Morgan, Sir W. Vaughan Morgan, Bart., Mr. S. Vaughan Morgan, Mr. G. Vaughan Morgan, Mr. Henry Walker, Miss Brind, Mr. John E. Glass, Mr. Peter MacEwan, Miss Dooley, and Mr. Wheeler.

Contents of this Issue.

Vol. LXXV., No. 5 (Series No. 1540).

	PAGE
A Holiday in Portugal, by W. Mair, F.C.S.	181
Agri-horticultural Poisons...	175
B.M.A. Exhibition	196
Bankruptcy Reports	174
Births	177
BRIT. PHAR. CONFERENCE:	
The President	199
The Reception	200
Presidential Address	201
Welcome (Weddell)	210
Thanks to President (Martin and J. Smith)	211
Reports	212
Martin on Bio-chemical tests	213
Naylor and Chappell on Extractive and Glycerin	216
Finnemore on Cimicifuga	216
Pollard on Emulsions	217
Tuesday's informalities	218
Delegates Welcomed	219
Tocher on Dispensing	219
Discussion on ditto	220
Gadd on Poisons	222-5
Alcock on Antim. sulph.	223
Howard and Harrison on Antim. sulph	224
Harrison on Bismuth salicylate	225
Franklin on Ung. paraff.	226
Symes on Ext. ease. sag. liq.	226
Cowie and Brander on Cacao butters	227
Cowie and Broadbent on Galenicals	227
Hill on Euphorbia	227
Pinchbeck on Strychnine	228
Dott on Alcohol	229
Barger on Ergot	229
Harrison on Malt and oil	230
Remington and Lancaster on Oils	230
Final Proceedings	231
The New President	231
Who Were There	231
The New Secretary	232
Business Changes	232
Chemists' Windows	232
Codex Formulas	234
Colonial and Foreign News	172
Corner for Students	168
Correspondence	241
Deaths	177
Deed of Arrangement	174
Editorial Comments:	
Pharmaceutical Week	182
Straits Settlements Pharmacy Bill	185
Otto of Rose	186
Notes	186
English and Welsh News	169
Fairchild Scholarship	237
Five Decades	237
French News	171
Gazette	175
How to treat Travellers	233
Industries of the Tyne	179
Information Wanted	190
Irish News	170
Insects	187
JUBILEE OF THE C. & D.:	
Its Predecessors	176
Morgan Bros. (group)	137
How it Started	138
Sir W. Vaughan Morgan	139
Mr. S. Vaughan Morgan	141
"C. & D." a weekly	142
"C. & D. Diary"	144
United Society	145
Sir Thomas Dakin	146
Pharmacy Act, 1868	147
C. & D. Writers	148
J. C. Brough	149
Brit. Pharm. Conf.	150
Mr. M. Carteighe	150
Mr. A. C. Wootton	152
C. & D. Books	152
Our Publishers	152
Exchange Column	153
Mr. Henry Walker	153
Advertisers, 1859-1909:	
Aërnted-water Machinery	155
Aërated-water Materials	155
Condy's Fluid	156
Pearl-coated Pills	157
Butter Colouring	157
Bottles	157
Pharmaceutical Chemicals	157
The Newberys	158
Transfer Agency	158
Popular Medicine	160
Lint and Boxes	160
Veteran Readers	161
Morgan Bros. and their Staffs	166
Leech on Poisons	232
Legal Reports	172
Marriages	177
Medical Gleanings	235
New Companies and Company News	175
Notes of Novelties	194
Observations and Reflections	181
Our Town Traveller	196
Personalities	178
Prescription Problem	237
Reviews	236
Scots News	171
South African News	171
Summer Outings	177
Trade Notes	238
Trade Report	239
Westminster Wisdom	180

EDUCATIONAL NUMBER.

THE annual Educational Number of the *C. & D.* will be published on Saturday, August 14. It will contain complete information in regard to the curricula and examinations required of pharmacists, medical practitioners, dentists, veterinary surgeons, and practitioners in certain departments of applied science. In addition to the ordinary circulation, the number will be addressed to Hospitals and various Educational Authorities connected with these professions, so that it will be a particularly good one for advertisements of educational and scientific supplies, as well as medicines generally. Space may be booked now by addressing the Publisher of the *C. & D.*, 42 Cannon Street, London, E.C.

SIGHT-TESTING AND SPECTACLE-FITTING are one of the most profitable business-adjuncts for chemists. They will find all about it in "The Chemist-Optician," published at the *C. & D.* Office, price 4*s.*, by post 4*s.* 3*d.* Most wholesale houses stock the book.

Summary of the Week.

(News received after Wednesday is in the Coloured Supplement.)

Agri-horticultural Poisons.

The Lord Lieutenant and Privy Council of Ireland have gazetted regulations under Section 2 of the Poisons and Pharmacy Act, 1908, for the granting of licences to sell poisonous insecticides and sheep dips. We print the regulations in full, with notes showing the difference between them and the provisional rules gazetted in March (p. 176).

British Pharmaceutical Conference.

The forty-sixth annual meeting was held at Newcastle-on-Tyne this week, and we include a full report of the proceedings from Monday evening, when Mr. J. F. Tocher, B.Sc. (the President), received a large number of guests in Armstrong College. Meetings of the Conference were held on Tuesday and Wednesday, and included the presidential address on "Some Problems that Face the Pharmacist," besides more than a dozen papers and two set discussions on "Dispensing by Pharmacists" and "Problems of the Poisons Schedule." Our report begins on p. 199.

Busy people will find summaries of the presidential address and of the papers to save their time. They begin on p. 183. Cambridge is to be the meeting place next year, and Mr. F. Ransom is the new president.

Contributions.

The final article of our series on Newcastle deals with Tyneside Industries (p. 179).

Mr. Granville Shaw's sketches on the chemist's visits from travellers are amusing. (See p. 233.)

The monograph on the history of the *C. & D.* speaks for itself. A poet breaks into song with our Jubilee as his theme (p. 237).

Mr. William Mair, F.C.S., writes charmingly on a visit he has recently paid to Portugal. He describes its scenery, its pharmacy, the hospitality of the people, and illustrates his observations with some beautiful pictures. The article begins on p. 191.

We have been unable to find room for a number of illustrated and practical contributions which were prepared for this issue. The fact of the matter is that this number could not be made larger for international postal reasons. What our readers do not get to-day, they will have another time.

Correspondence.

The letters this week stimulate more on the same subjects, which are: Companies in Ireland, the New Certificate, a Chemists' Dental Society, Store *v.* Private Assistants, Apothecaries' Assistants, and lotio hydrarg. nig. A letter from the Secretary to the Pharmacists' Parliamentary Committee is one of many held over. The letters are followed by dispensing, legal, and miscellaneous queries, the whole beginning with a new representation of an old friend (p. 941).

Legal.

It has been decided at Ashton-under-Lyne that a chemist and druggist may not sell quinine-wine at a stall in a market-place (p. 174).

The Bradford County Court Judge has decided in favour of the Pharmaceutical Society, who proceeded against a local company under Section 15 of the 1868 Act for keeping open shop for the sale of poisons (p. 174).

The Divisional Court of King's Bench has, on the appeal of the Inland Revenue Department, decided that "Anti-Neurasthin," which is sold as a food, is held out for the relief or cure of human ailments, and is dutiable as a medicine (p. 173).

Among other legal decisions is one respecting the valuation of a chemist's business in Oxford, the abandonment of two actions by the manufacturers of Bile Beans, and a decision that delivery of spirits without permit implies that the receiver need not pay for them (p. 172).

News.

The white paper pages in this issue went to press on Wednesday evening. Any important news received after that will be found in the Coloured Supplement.

Trade Matters.

In a leading article on Bulgarian otto we indicate a few features of the market, and also give analyses of typical samples of the new distillates. The otto is of fine quality, but adulteration this season is more rife than ever (p. 186).

Market changes are few up to the time of closing for press. Gallic acid is dearer, and foreign citric acid is easier. Turkey opium is irregular, but prices are still tending downwards. Cascara and menthol are easier. A full report of Thursday's auctions of first-hand drugs is given in our Coloured Supplement (p. 239).

G

Corner for Students.

Conducted by Leonard Dobbin, Ph.D.

SUMMER CONTRIBUTIONS.

Business Knowledge.

By A. E. Holden.

[Studies are, although they should not be, circumscribed by examination requirements. Students of pharmacy in Great Britain and Ireland study botany, chemistry and physics, materia medica, prescription Latin, and pharmacy, because they have to pass examinations in these subjects. The law thus ensures that they have knowledge of their business, but this does not mean that they have business knowledge. By the latter is meant familiarity with transactions in buying and selling and all that appertains thereto. Without business knowledge no pharmacist can hope to apply successfully his knowledge of the business of pharmacy so as to earn a living. Pharmacy law does not, and is never likely to, require examination of pharmacists as to their business knowledge before they are certified to sell or keep open shop for the sale of poisons and compounding medical prescriptions. As Mr. Holden, Secretary to the Committee of the Fairchild Scholarship, has exceptional experience of what students should know about business, his hints should be studied.—Editor *C. & D.*]



Mr. A. E. Holden.

IN view of the very general interest which has arisen in regard to the Business Knowledge questions in the annual examination for the Fairchild Scholarship and Prizes, and in the hope that greater attention may be given to the subject by students of pharmacy generally, I venture to put forward some comments upon the subject. These are submitted also in the hope of fortifying the existing interest of employers in this section of the examination. The trustees, in recognition of the value justly placed upon the business aptitude of students, have, from the inception of the Fairchild Scholarship, regarded business knowledge as an important factor in the career of candidates, and therefore a desirable subject for questions. While the average apprentice is well directed by his employer in chemistry, pharmacy, and materia medica, it seems that he is frequently allowed to plough his own furrow in the purely commercial elements of the business. "Size up" the business knowledge of a student and you ascertain his ballast. A clever pharmaceutical student may be a weak business man, and a student weak in pharmacy may be a clever business man. The just balance of such qualities makes of a student a business success.

At each examination questions have been set of such a nature as to enable candidates to reveal (1) their natural common sense in the treatment of ordinary affairs of life as they occur in a chemist's shop, (2) their familiarity or otherwise with the peculiar conditions which apply to or control the business of a pharmacist, and (3) their acquaintance with accountancy, cash, carriage, and other things which are common to all businesses—chemists, drapers, and grocers, for example. The nature, rather than the extent of the purpose, is well illustrated in the Business Knowledge questions in this year's examination, as follows :

1. What are the regulations and law in respect to the sale of arsenical sheep-dip by (*a*) registered chemist and druggist; (*b*) licensed persons?

2. The Excise-duty on spirit has been advanced by 3*s.* 9*d* per proof gal.; it was previously 11*s.* per proof gal. Proof spirit is approximately alcohol 50 per cent. Calculate the advances which should be made in the prices of the following preparations ,so as to cover the increase of duty and 5 per cent. on the total cost:

(*a*) Tr. gentian. co. ... ... 2*s.* 1*d.* per lb.
(*b*) Tr. cinchonæ ... ... 3*s.* 8*d.* ,,
(*c*) Tr. myrrhæ ... ... 3*s.* 10*d.* ,,

Assume that (*a*) 17 fl. oz. = 1 lb., (*b*) 17½ fl. oz. = 1 lb., (*c*) 18 fl. oz. = 1 lb.

3. A representative is instructed to quote the following discounts:

20 per cent. and 10 per cent. off invoices 5 per cent. statement 28 days.
20 per cent. and 5 per cent. off invoices 10 per cent. statement 28 days.
30 per cent. off invoices 5 per cent. statement 28 days.

State which would be the most advantageous or otherwise to his clients, proving your answers by figures.

4. In a consignment of goods (carriage forward) received you find a pound bottle of oil of lemon has leaked and damaged a dozen parcel of proprietary pills (2*s.* 9*s.* per box retail), and on checking the goods with the invoices you find 1 lb. of chloroform short? State what you would do in these circumstances.

The correct answer to each of these questions, except the first, cannot be learnt or quoted from books, and the information elicited from candidates in their answers to the questions defines their business capacity, shows what they have learnt in the shop about business routine, and sometimes affords a better measure of their intellectual resource than is given by answers to book subjects. It should be noted, moreover, that the business questions relate to the actual business of a pharmacist. Trap questions (such as a requirement to "represent in one figure eleven thousand eleven hundred and eleven") occasionally met with in examination papers are carefully avoided, and only questions calculated to define the pharmaceutical business calibre of the candidate are given.

Each year furnishes a number of candidates who show considerable general ability, yet a dearth of business knowledge is revealed in some otherwise meritorious papers. That statement is amply verified by the percentages of marks gained in the various subjects year by year. Occasionally a candidate who shows remarkable familiarity with chemistry, pharmacy, and materia medica breaks down so woefully in the business knowledge paper as to suggest that he has gone through years of work in the shop without giving a thought to what he is doing. In other cases the business answers to questions of accountancy or the like suggest that an effort has been made to "get up" the subject from books. If there is a Royal Road to the mastery of this subject *it is in the shop.* Students must *observe*, and, if they think it necessary, *record.* I mean by this that questions on the pharmacist's business knowledge must necessarily include those business transactions which are more or less controlled by law, such as No. 1 in the above quotation. Every student of pharmacy must sooner or later *know* what should be done in such cases; the latest time is when he becomes qualified and commences business on his own account. Then the law expects him to know and to put his knowledge into practice. I suggest, therefore, that students should keep their eyes open in business, and systematically endeavour to learn the general routine of commercial transactions, the precautions special to pharmacy, the manner in which monetary transactions are conducted, the methods by which time, space, and money are saved in business, and the possibilities which may exist in pharmacy for creating business. These are generalities, but it is for the student—the learner—to fill in the details from his daily experience; and, again, I appeal to employers of such learners to help them by words in season, especially in inculcating in their minds that such humble duties as unpacking a parcel of goods (see Question 4 above) involve important business principles. A few minutes spent with an employé when such a circumstance arises in explaining what the employer is to do in order to ensure that he does not lose by the faults of others will repay him tenfold, and should add to the business knowledge of the learner. One such demonstration per week will, in the course of a three or four years' apprenticeship, put the learner far on the way to proficiency in business knowledge—if he is of the right stuff.

Business acumen to-day spells "business success" in pharmacy no less than in other honourable branches of commerce. It is not the possession of botanical knowledge of the elderflower that makes the "Elder King," but he who is able to buy well and sell well may become an "Elder King."

Chinese Musk.—The exports from Hankow in 1908 were valued at 4,534*l.* in 1908, against 3,486*l.* in 1907.

English and Welsh News.

Local Newspapers containing marked items of news interesting to the Trade are always welcomed by the Editor.

Brevities.

The quaint old Whitgift Hospital at Croydon, the foundation-stone of which was laid in 1596, is to disappear shortly owing to the adoption of a road-widening scheme.

The Eastbourne Guardians, by ten votes to four, have disapproved of their medical officer's action in appointing Miss Rose, superintendent nurse, as dispenser at the infirmary. The Guardians ask that a qualified dispenser be appointed.

At the London Sessions on July 22, Henry Forewell (57), chemist and druggist, was found not guilty of a charge of stealing 1*l*. 12*s*. 8*d*., the property of Mr. D. A. Still, chemist, 39 Artillery Row, Woolwich, where he was manager from April until June 21.

M. Blériot, a French aviator, showed, in the early morning of July 25, the great possibilities that the future holds for aerial commerce by flying a distance of 26 miles across the English Channel from Calais to Dover in as many minutes with a monoplane actuated by a low-power motor of his own construction.

The City of London Engineer (Mr. Frank Sumner) states in his annual report that an explosion which occurred in the sewer beneath London Wall, near Basinghall Street, was no doubt due to chemical or other inflammable substance having been discharged into the sewer. No injury was caused to the sewer-men, but employés should be warned against discharging explosive liquids down the drains.

At the South-Western Police Court on July 26, Duncan Carmichael, described as a chemists' assistant, Bennerley Road, Wandsworth Common, London, S.W., was dismissed on a charge of using insulting words, whereby a breach of the peace was committed. It was alleged that defendant interrupted an anti-Socialist meeting on Clapham Common. Witnesses deposed that both parties got excited, and the speaker struck the defendant, who retaliated.

At Market Rasen County Court on July 19, Mr. James Casterton, chemist and druggist, Market Rasen, was sued by the London Guarantee and Accident Co., Ltd., for 4*l*. 14*s*. 6*d*., due for three premiums on an accident policy for himself. The plaintiffs alleged that Mr. Casterton, who was their agent, signed the receipts. However, it was proved that the last receipt was sent from the head office. Judgment was given for Mr. Casterton, with costs.

Private C. E. Saunders, pharmacist, of the Highgate Detachment, 7th Battalion Middlesex Regiment, shot well in the contest for the King's Prize at Bisley last week. His aggregate of 190 points in the first and second stages out of a possible 205 was only five below that of the Silver Medallist, and easily qualified him for a place in the "King's Hundred." In spite of the stormy and difficult weather conditions prevailing in the final stage on Saturday he kept twenty-eight of his thirty shots at 800, 900, and 1,000 yds. on the targets, and won a prize of 10*l*. and a badge. Mr. Saunders previously obtained two "Queen's Hundred" badges, won in 1893 and 1898 respectively.

Middlesex County Council.

The annual report of the General Purposes Committee for the year which ended March 31 has just been published, and it is of interest owing to the fact that it deals chiefly with the work of the department the chief officer of which is a pharmacist, Mr. R. A. Robinson, barrister-at-law. While the efficiency of the department has improved, various economies have been effected. During the year 40,372 weights were stamped and verified, 12,908 measures, and 4,094 weighing instruments. Only 54 metric weights were verified and stamped, and four metric weighing instruments, making a total of 57,374. The report mentions that "the metric system makes no headway." There is not a single chemist in the list of traders in which incorrect weights and measures were detected. One of the most interesting parts of the report deals with the administration of the Sale of Food and Drugs Acts. The county analyst (Mr. E. A. Bevan) received during the year 2,035*l*. 6*s*. 11*d*. for his work under the Acts and under the Fertilisers and Feeding Stuffs Acts (a saving of 63*8l*. 10*s*. 7*d*.), a new system of remuneration having been established in May, 1908, owing to the development of sampling on the informal and series systems. By "informal" sampling is meant the purchase of samples in the ordinary way of business, and 1,693 of these were taken during the year, as compared with 1,935 formal samples, the total of both being 5,628, as compared with 4,660 taken in the previous year, when 202 informal samples were purchased. There were purchased during the year 222 samples of drugs, of which 31 were found to be adulterated, and 30 formal samples, six of which were adulterated. From tabular statements it appears that in 1907-8 the percentage of adulterated drugs in Middlesex was 5.2, as compared with 7.1 throughout the country in 1907, while in 1907-8 the percentage of adulteration in Middlesex was 14.7. The committee might put the matter differently, for 14.7 per cent. of the drugs sold in Middlesex are not adulterated; it is 14.7 per cent. of the drugs purchased which have been found to be adulterated, which is a very different thing. The drugs referred to were as follows (the figures in parentheses are the numbers of adulterated samples):

Tartaric acid, 22; alum, 4; borax, 4; camphorated oil, 68 (25); camphor and oil, 2 (2); castor oil, 4; cream of tartar, 7; Epsom salts, 9; eucalyptus oil, 11; glycerin, 19 (3); glycerin and tannic acid, 7 (2); paregoric, 16; prescriptions, 36 (2); seidlitz powders, 24 (3); miscellaneous, 19.

Besides the foregoing subjects, the report also deals with the administration of the Bread Acts, Explosives Acts, Shops Regulations Acts, Employment Agencies and the Employment of Children Act, the gross expenditure of the administration being 5,002*l*. 6*s*. 8*d*. and the fees obtained 522*l*. 13*s*. 6*d*.

Spectacle-makers' Company.

At the recent examinations held by the company Mr. A. E. Dyson (Plymouth) passed the final examination in advanced optics and scientific instruments. The following also passed the final examination, and, subject to the approval of the Court, will be granted the diploma: F. W. Brewis (East Dulwich), *Sydney Bell (Lewisham), *S. H. Clegg (Redhill), A. E. Dyson (Plymouth), *Harold Dixon (Ilford), *J. Davies (Llanelly), W. H. Filtness, (Brighton), J. M. Gibson (Glasgow), H. C. E. Heller (Upper Tooting), *J. R. Hebditch (Retford, Notts), *H. Humphry (Dartmouth), H. E. Kersey (Ipswich), F. J. Meakes (Llanelly), *J. P. Norwood (Rotherham), A. E. Pugh (Worthing), *C. Smalley (Ipswich), P. Selby (Openshaw), *F. L. Stanton (Brecon), *A. J. Stones (Birkenhead), E. Tomkins (Streatham). (The names to which asterisks are attached are pharmacists.) The following passed the preliminary examination: A. E. Brownridge (London), S. R. Butcher (Peckham), H. Cowlin (Southend), E. W. Crosier (Newcastle-on-Tyne), H. F. Fairbanks (New Barnet), P. Gray (Walthamstow), W. H. H. Huddy (Liskeard), R. H. Harris (Aberdeen), Miss R. J. Hallett (Brighton), A. E. Hayden (Ilford), H. T. Pearson (Truro), W. G. Pearson (Pimlico), W. E. Tydeman (Stowmarket), A. H. Watson (Tunbridge Wells).

Cambridge Pharmaceutical Association.

A special general meeting was held by this Association at the residence of Mr. Church, in St. Andrew's Street, on July 23, to consider the question of inviting the British Pharmaceutical Conference to visit Cambridge in 1910. Among the large and representative gathering were Alderman A. Sidney Campkin, Mr. E. S. Peck, M.A., Mr. H. F. Cook, J.P., Mr. West Knights, F.C.S., Messrs. A. A. Deck, P. Pain, J. Evans, Church, Course, and T. J. Mallett (Hon. Secretary). Alderman A. Sidney Campkin presided in the absence of the President (Mr. B. S. Campkin). At the conclusion of a long and interesting statement by Mr. Peck it was decided unanimously—

That the Cambridge Pharmaceutical Association invite the British Pharmaceutical Conference to visit Cambridge next year—viz., 1910.

Dr. Reynolds Green was unanimously elected Chairman of the Local Executive Committee, and Messrs. A. S. Campkin, Church, and A. A. Deck signified their willingness to take part in the Local Committee's formation.

Alleged Unskilled Extraction of Teeth.

At the Glamorgan Assizes, held at Swansea on July 26, John Matthews, butcher, Abercynon, and his wife sought to recover damages from the Hygienic Institute for alleged negligent and unskilful extraction of the teeth of the female plaintiff. Mr. B. Francis Williams, K.C., for the plaintiffs, said the defendants were two foreigners, who touted for business under a high-sounding title in various places. Their servants in April last extracted five teeth from the mouth of the female plaintiff, including one which was perfectly sound. In the operation her jaw was broken in two places, and a piece of bone torn away. According to a Penarth dentist, the contour of the jaw was rendered unfit for the wearing of artificial teeth. Mr. Abel Thomas, K.C., M.P., for the defence, said it did not make much difference what the defendants represented themselves to be so long as reasonable skill and care was exercised.—Alfred Webb, the operator, denied the allegations as to the state of the woman's jaw. He admitted such a state would indicate an unskilful operation.—Stanley Berwick, who said he was a licentiate in dental surgery, deposed to finding plaintiff's mouth after the operation in good order. In reply to plaintiff's solicitor, who asked if he had not been struck off the register for disgraceful conduct, witness said that had nothing to do with his professional ability, the disgraceful conduct referred to being illegal pawning.—The jury, after half an hour's deliberation, returned a verdict for the defendants.

Contracts.

London County Council.—J. R. Collins & Co., for the supply of chemical apparatus.

Bolton Town Council.—The Killgerm Co., Cleckheaton, for the supply of disinfecting-powder.

Bury (Lancs) Guardians.—Messrs. Clemishaw, Bury, for the three months' supply of medicines.

Analysts' Reports.

The Paddington analyst reports that four samples of sal volatile and two samples of salad oil were examined last quarter and found to be genuine.

The analyst for the East Riding of Yorkshire examined ten samples of camphorated oil and one of paregoric during the last quarter. Three of the former were 1.7, 3.1, and 18.6 per cent. deficient in camphor; while the paregoric sample was 11.3 per cent. below the standard for alcoholic content. The vendors were cautioned.

Cricket.

The Leicester Pharmacy Athletic Club effected their sixth successive win on July 22 by defeating the Leicester Tramways C.C. at the Belgrave Recreation Ground. Tramways, who batted first, were soon in difficulties, and the whole side were dismissed for 57, of which one batsman made 28, not out. Miles took six wickets for 17 and Chawner three for 17. The Chemists lost four dependable batsmen without troubling the scorer at all. Miles played well for his 26 runs, and with Wardman, the last man, scoring 13, not out, the "Pillmen" secured a narrow victory by four runs with a score of 61.

Female Pills.

At Kensington on July 26 Mr. Ingleby Oddie held an inquiry with reference to the death of Margaret Jane Steven (27), wife of a bootmaker of Golborne Road, North Kensington. The husband deposed that deceased had taken eleven "female pills" to procure abortion. Mr. Albert W. Phillips, chemist and druggist, 330 Portobello Road, London, W., said he could not identify deceased as a customer, but he sold pills similar to the box produced. The principal ingredients of the pills were iron and aloes. They were really for anæmia, and although eleven of them would cause a great deal of purgation under no circumstances would abortion be produced. The label on the box stated the contents included hiera picra, bitter apple, tansy, unicorn root, and pennyroyal—two to be taken at bed time and one in the morning. Dr. Percy Potter stated that death was due to peritonitis from an internal abscess. There was nothing to suggest abortion or an illegal operation. The jury returned a verdict accordingly.

Poisonings.

Eight fatalities, including two misadventures, have been recorded up to Wednesday.—Potassium cyanide was used for suicidal purposes by Cornelie B. C. Charles (40), artist, St. John's Wood, London, N.W.—E. T. Ridgway (35), of Butts, was found in a dying condition on Hearsall Common suffering from laudanum-poisoning.—Laudanum and chloroform were the lethal agents used by a Mickleton groom named Thos. Price (35). Deceased obtained 2 oz. of chloroform and 1 oz. of laudanum from Mr. R. H. Hands, chemist and druggist, Campden, by stating that he had been sent by a veterinary surgeon.—Annie E. Jenkinson (22), of Workington, swallowed about 2 oz. of carbolic acid with suicidal intent, and died shortly afterwards.—Nancy Melling (32), a labourer's wife, committed suicide at Bolton by taking poison. Dr. Rees said that the probable cause of death was "Cresolene," a bottle of which was found in the deceased's pocket.—Gertrude Walker (26) ended her life at Bradford by taking salt of lemon.—The two-year-old son of Fredk. Clarke, of Barry Dock, obtained a bottle containing vitriol from the window-sill by climbing upon a chair, and took a quantity with fatal results.—Geo. W. W. Lincoln, aged fourteen months, died at Norwich after swallowing a quantity of crystals of potassium permanganate, which he obtained from an open tin. At the inquest a verdict of "Death by misadventure by the absorption of poison and cardiac failure" was returned.

Irish News.

Local Newspapers containing marked items of news interesting to the Trade are always welcomed by the Editor.

Poisoning Charge.

John Tease was at Donegal Assizes last week put on his trial for the third time on a charge of inciting Catherine Buchanan to murder her husband by putting strychnine in his food. The facts have been previously reported in the *C. & D.* After a trial lasting two days the jury again disagreed and were discharged. The prisoner was detained in custody.

Assize Case.

At the Belfast Assizes on July 23, Robert Sherlock was charged with having obtained six glucose-casks by false pretences in January 1906 from Messrs. Wm. Dobbin & Co., wholesale druggists, North Street, Belfast. Accused evaded until last May. He obtained the casks by pretending he was sent by another man. Prisoner was sent to gaol for another month, in addition to the two months he had already spent in custody.

Price-list.

Mr. W. J. Jones, pharmaceutical chemist, 82 Quay, Waterford, has issued his 1909-1910 price-list. The fifty-page pamphlet, with hanging loop, gives photographs of the exterior and interior of the pharmacy, and in addition to the usual price-list special attention is called to the compounding department, photographic and optical supplies, and veterinary remedies, all of which should aid in extending the business. Postal information and a directory of local practitioners, dentists, nurses, midwives, etc., are also included.

British Medical Association.

The annual meeting of this Association is being held in Belfast this week. Professor Sir William Whitla, M.D., L.P.S.I., of Queen's College, was inducted to the Presidency on the evening of July 27, when he delivered an address. As is customary at these annuals meetings, a museum and exhibition are being held—by permission of the Corporation—in the City Exhibition Hall, which is lent for the occasion. The exhibition consists chiefly of medical and surgical preparations, and is good. Messrs. Burroughs Wellcome & Co. are exhibiting for the first time for a number of years. We hope to refer more fully to the exhibition later on. Dr. J. C. McWalter is reading a paper on "How to Deal with the Quack Medicine Traffic."

Scots News.

Local Newspapers containing marked items of news interesting to the Trade are always welcomed by the Editor.

Dundee.

Commercial travellers report that orders in the district have been extremely small for some time. The trades holidays are now on, and many chemists have gone for the annual change of scene and occupation.

At a meeting of the Trades Council on July 21, Mr. D. Petrie, a delegate from the National Amalgamated Union of Shop Assistants, sought the Council's aid in getting the pharmacists in the centre of the city to extend the early closing on Wednesday afternoons and continue it throughout the year. The matter was referred to the Local Affairs Committee.

Mr. Charles Kerr, 56 Nethergate, Dundee, may be ranked with the pharmaceutical chemists in Scotland who are older than the late Mr. John Currie, of Glasgow. He was born in 1835, and apprenticed in 1849. He began business in Dundee in 1864, but it was not until 1868 that he entered for and passed the Major examination, hence he was not mentioned among Scotland's pharmaceutical veterans in our notes last week. Although in his seventy-fifth year, Mr. Kerr is still able to run a motor and attend to his business day by day.

Edinburgh.

Madame Curie was elected LL.D. of the University *in absentia* last week.

Mr. Henry Alexis Thomson has been appointed to the University Chair of Surgery.

Business was good last week, although most of the working people were on holiday. The Glasgow trades holidays coinciding more than made up for the absence of regular customers.

Fifeshire.

Mr. G. B. Key, chemist and druggist, Kirkcaldy, tied for the second place in the handicap at the Summer Meeting of the Kinghorn Golf Club on July 24.

The chemists near the large Territorial camp between Aberdour and Burntisland appear to be reaping their harvest.

Mr. Thomas Yule, chemist and druggist, has been elected to the treasurership of the Cowdenbeath Town Council. Mr. Yule entered the Council in November last, and his thorough grasp of financial matters has secured this rapid promotion.

Glasgow.

Chemists at the watering-places in the West complain that the amount of business is not so great as last year.

Claims against the late Mr. John Currie, pharmaceutical chemist, 39 Eglinton Street and 64 Crown Street, Glasgow, are to be lodged with Mr. William Stirling, writer, 184 West Regent Street, Glasgow.

French News.

(From the "C. & D." Paris Correspondent.)

PHARMACY STUDENT KILLED.—An express train ran into a motor-car at a level-crossing at Cléquerec, Lorient. The car contained three persons, one of whom—M. Henri Quettier, a Paris pharmaceutical student—was killed.

M. ARTH, whose death is reported at Nancy, succeeded Professor Haller—when the latter was appointed Professor of Organic Chemistry at the Sorbonne, 1899—as Director of Nancy Chemical Institute. He continued the traditions of the eminent founder of this remarkable establishment, and left it in full prosperity.

THE WHITE CROSS CONGRESS, to be held in Paris next October, is attracting the attention of the French Parliament. M. Decker-David has deposited a draft law providing for a subvention of 40,000f. in aid of the Congress; this has been "backed" by many of his fellow M.P.s, and there is little doubt that it will be granted.

PHARMACY INSPECTION UNDER THE ADULTERATION ACT.—The Minister of Agriculture has issued a circular to the Prefects giving instructions as to the inspection of pharmacies and taking of samples. The document points out that the inspector (pharmacist) has "alone the right to take samples in officines, as well as on doctors' and veterinary surgeons' premises," though he may call in the aid of other officials. On the other hand, the inspector (pharmacist) shares with the assistant inspector (non-pharmacist) the right to visit the non-pharmaceutical establishments (factories, mineral-water warehouses, etc.) specified in the Law of June 25, 1908, which modifies the Law of Germinal so far as this detail is concerned. The assistant-inspectors may take the initiative, when necessary, in examining non-pharmaceutical establishments; "but, generally speaking, it is preferable that they should only proceed on indications given by the pharmacist-inspectors, on account of the special nature of the goods which may require to be seized." The only fact which gives the assistant-inspector a right to enter an officine is the sale of non-pharmaceutical substances. For instance, a pharmacist who sells extracts or the like for the preparation of beverages, treatment of wines, beers, and ciders, or alimentary substances (such as sterilised milk) lays himself open to this non-pharmaceutical inspection. The various authorities are instructed to supply the necessary official forms to inspecting pharmacists, as well as sample-cases, etc.

South African News.

(From the "C. & D." Correspondents.)

Natal.

A DURBAN SOUVENIR.—We have received an illustrated souvenir of Durban, published by the Central News Agency, Ltd., Smith Street, Durban, at 6*d*. It contains about 100 photographs of Durban, measuring 8 in. by 5 in., most of them being by Mr. G. Stuart Jones, wholesale chemist and druggist, 322 West Street, Durban. It is a wonderful sixpennyworth, as the photographs are exceptionally good. They show that Durban is one of the finest situated cities in the British Empire, and that photography might be developed by chemists into a splendid side-line.

Orange River Colony.

THE "GOVERNMENT GAZETTE" of July 2 contained a list of all registrations (including four chemists) effected by the Medical and Pharmacy Council since January 1 last. This notification is in accordance with the determination of the Council that all their registrations should be officially published, the Government having conceded the point after some correspondence.

EXPORT OF TINCTURES, ETC.—The "Government Gazette" of July 2 contains the following notice, which is of interest to all chemists in South Africa who may have occasion to export spirituous preparations into the Orange River Colony:

Notice is hereby given that tinctures and medicinal preparations containing more than 3 per cent. of "proof-spirit" and manufactured within the Customs Union of spirits produced therein when imported into this Colony are treated as "mixed spirits" under the provisions of Article 8 (2) of the "Excise and Import Duty Ordinance" No. 29 of 1906 and are liable to a duty of 9*s*. per imperial gallon. Every person importing such tinctures and medicinal preparations into this Colony in quantities of two gallons or upwards must obtain in advance a permit for such importation under the provisions of Article 39 of the Liquor Licensing Ordinance No. 8 of 1903 and importers of any quantity less than two imperial gallons shall be obliged to report such importation to the nearest magistrate or assistant magistrate, and forthwith pay the duty. Any person importing any such preparations into this Colony without permit or without paying the duty shall be liable on conviction to be punished by a fine not exceeding 50*l*. sterling, and in default of payment to imprisonment, with or without hard labour, not exceeding six months.

It has been officially declared that this portion of the law will be strictly enforced in future, and as it has been a common complaint that general dealers were in the habit of getting these preparations enclosed with soft goods, and not marked on the invoice (thus evading payment of the 9*s.* per gallon duty when importing from Cape Colony and Natal), the strict enforcement of the law now promised should operate in favour of the local chemist, who is able to get his spirit duty-free for manufacturing purposes. The Collector of Customs states that he will confiscate all the contents of cases containing parcels of spirituous preparations not declared.

Rhodesia.

Mr. A. Walsh, managing director of Lennon, Ltd., spent a few days at Bulawayo and Salisbury. Messrs. Lennon, Ltd., have already commenced building fine premises at Salisbury.

Transvaal.

Pharmacy and Farming.—Smith, Rive & Co., Ltd., 15 Von Weilligh Street, Johannesburg, will shortly go into voluntary liquidation. Messrs. Smith, Rive & Co. have been established many years in Johannesburg, and have sold their several branches to the respective managers. Mr. Smith has secured a sheep-farm near Aliwal North, in the Cape Colony, while Messrs. Rive and Alderton have decided to take up farming near Heilbron, in the Orange River Colony.

Baffled Burglars.—On Monday morning, June 14, Mr. McElwee, who manages Messrs. Keating's chemist shop at the corner of Pretoria and Quartz Streets, Johannesburg, was awakened about 1 o'clock by a "night call." He went down to the shop and made up a prescription, and after looking to see that all was safe, went back to bed. About 1.45 he was again aroused by the continuous ringing of the bell and loud knocking at the door. He hurried down to the side door, where two policemen informed him that an attempt had been made to break open the doors of the shop, which had not succeeded, a five-eighths inch bolt having baffled the burglars.

Colonial and Foreign News.

New Business.—Mr. John Joseph intends opening shortly the St. Louis Medical Stores at Nuwara Eliya, Ceylon.

Professional Jubilee.—At Munich, Dr. Adolf von Baeyer celebrated his jubilee as Professor of Chemistry at the University of that town. He commenced his professional career in Berlin in 1859, and succeeded Liebig in the professional chair at Munich in 1875. The professor is seventy-four years of age.

Chemical-works Destroyed.—A great fire occurred on the night of July 22 at the Tentelew Chemical-works, St. Petersburg. While the conflagration was in progress, a receptacle containing benzine exploded, injuring thirty-one firemen and workmen. The building, which was four storeys high, was destroyed, the roof being hurled a great distance by the force of the explosion.

Pharmacy in Mauritius.—Writing in regard to the trade of Mauritius the French Consul at Port Louis states that there has been a slight decrease in the importation of pharmaceutical products during recent years. The two largest pharmacies in the island are the Mauritius Pharmacy Co., Ltd., and A. Minet & Co. There are other smaller pharmacies mostly in French hands, and those who wish to cater for the trade would do well to print their price-lists, labels, and advertising-matter in French.

Japan Sulphur in Europe.—Hitherto Japan has exported her sulphur chiefly to Australia and the United States, but quite recently (says the "Oriental Druggist"), a Norwegian paper-mill exporting paper to Japan, has placed an order for 2,300 tons of Japanese sulphur with a Japanese firm in Hamburg, this being the first shipment to Europe. It is possible that this shipment may be the precursor of others, and if so, a decided spurt may be given to mining in Japan.

Legal Reports.

Trade Law.

Bile Beans.—The High Court action C. E. Fulford, Ltd., *v.* J. Milner (Greenwich), which was commenced in January 1907, and a similar action against Wilde & Co., Southampton, for injunctions to restrain them from selling as "Bile Beans" any other bile beans than those of the plaintiffs' manufacture, have terminated, orders having recently been made dismissing both actions, with costs, without either of the defendants being called upon.

Permits for Spirits.—Judge Lumley Smith, K.C., sitting in the City of London Court on July 27, gave his decision in an action by Mayor, Sworder, Hanks & Co., Ltd., 116 Fenchurch Street, London, E.C., against Percy B. Green, journalist, Westcliff, for 5*l.* 15*s.*, being the value of 5 gals. of whisky supplied to him. The defendant admitted that he had received the whisky, but pleaded that no permit was sent with it and that he relied on an Act of 2 William IV., cap. 16, which was passed in 1832. By Section 12 of that statute, where any commodities for the removal of which a permit is required are delivered without a permit the value or price cannot be recovered. Judge Lumley Smith said he could not find that that section had been repealed, and the defence must prevail. Judgment accordingly, with costs.

Ships' Doctors.—In the City of London Court, on July 26, before Judge Lumley Smith, K.C., Dr. Joseph P. Little, East Suffolk Hospital, Ipswich, sued Messrs. Sparks, Treharne & Densham, wholesale druggists, London, Cardiff, Barry, and Antwerp, to recover the sum of 24*l.* as damages for alleged fraudulent misrepresentation and negligence. Mr. Basil Watson, for the plaintiff, said he preferred to rest the claim on negligence only, and withdraw the fraud. He added that plaintiff was until recently house surgeon at Peterborough Hospital, and in April last he desired to get a post as ship's doctor, and went to the defendants, who were agents for such matters, but he told them it was most important that he should be back in Huntingdon on May 12. He was introduced by the defendants to the Canadian and Pacific Line, and he was engaged as surgeon for the s.s. *Montezima*, paying the defendants a commission fee of one guinea. His pay was to be 10*l.* per month and all found. When he arrived at St. John's, New Brunswick, he ascertained that the vessel might possibly not be back in time for him to keep his appointment at Huntingdon, and, as he was under subpœna, he decided to leave his ship and pay his ordinary passage back on another steamer. That he did at an expense of 17*l.*, and he now demanded damages from the defendants for negligence in putting him on to a boat which might bring him back too late. For the defence, Mr. Harold Sparks, one of the defendants, was called, and after his evidence Judge Lumley Smith said there was certainly nothing in the case to support a charge of fraud. As a matter of fact the steamer got back by May 12. The defendants had not been guilty of any negligence, and he gave judgment for them, with costs.

Oxford Chemist's Business.—At the County Hall, Oxford, on July 20, before the Official Referee (Mr. H. W. Verey), John Ashby, trustee in bankruptcy of Oswald Frederick Dunford, sued Arthur Pearson, of the Oxford Drug Co., for 251*l.* 16*s.* 10*d.*, the balance of 1,001*l.* 3*s.*, the value of the stock and fixtures of the business of 132 High Street, Oxford, of which amount 500*l.* had been paid under an agreement and a further sum of 249*l.* 6*s.* 2*d.* had been paid into Court. Mr. Henry Dobb, for the plaintiff, explained that the defendant had deposited 500*l.*, and since that 249*l.* 6*s.* 2*d.* had been paid into Court. The plaintiff, however, contended that 1,001*l.* ought to be paid for the business. Messrs. Orridge & Co. made a valuation on behalf of plaintiff and Messrs. Hamlet & Dulake for defendant. The former made out detailed stock sheets, going into over 3,000 items, which showed the figure of 1,001*l.* odd. Messrs. Hamlet & Dulake, however, put forward a figure of 656*l.* At first there was some question as to whether some fixtures belonged to the landlord: that was settled, and Messrs. Hamlet & Dulake's figure raised to 631*l.* At a later date Messrs. Hamlet & Dulake increased their figure to 749*l.* 6*s.* 2*d.* The defendant's figures were: Fixtures, 271*l.* 13*s.* 2*d.*; stock, 415*l.* 3*s.* 1*d.* At the outset an umpire was appointed in case the valuers could not agree, but he afterwards declined to act, and the parties were unable to agree upon a fresh umpire, so those proceedings were necessitated. Mr. Joseph W. Brown, of Orridge & Co., Ludgate Hill, London, then gave evidence in support of Mr. Dobb's statement. He stated that he met Mr. Hamlet, as representing defendant, and an umpire was agreed upon in case of a dispute. Mr. Pearson was let into possession on September 30 on a deposit being paid. On September 29 witness first attended for making out an inventory. He went through the stock in detail. He produced the inventory he

made at the time. He priced the goods afterwards in London. He spent about four days in going through the stock, and detailed the precautions taken to ensure accuracy. He was examined at great length, and stated that Messrs. Hamlet & Dulake were house-agents at Oxford. An effort was made to put the case before Mr. Barclay, the umpire, but he refused to act. Mr. Spoke, for defendant, suggested that Mr. Brown, "an expert chemical man," should be called in. The Court adjourned until Tuesday, when Mr. Dobb stated that the two expert valuers had had a consultation, and had been unable to agree, but after a private conference between the Official Referee and counsel for nearly an hour and a half, Mr. Spokes said there was in Court a sum of 249*l.* 6*s.* 2*d.* He was willing to make that 350*l.* and pay the taxed costs. The Official Referee signified his approval and gave judgment to that effect.

High Court Cases.

The Ammonia Soda Co.

In the King's Bench Division on July 23, Mr. Justice Pickford delivered his reserved judgment in the action by Mr. John Henry Davies, Chester, against Mr. Arthur Chamberlain, Birmingham, and Mr. Ivan Livenstein, Manchester, to recover the sum of 5,000*l.* (*C. & D.*, July 10, p. 43). It appeared that the plaintiff was the owner of the Holford Hall Estate, near Chester, and, discovering brine beneath it, he sold it to the defendants for 51,086*l.* Plaintiff's case was that part of the bargain was that he was to find a third of the capital of the company to be formed to work the brine, or in the alternative he was to receive 5,000*l.* Defendants formed the Ammonia Soda Co., Ltd., and as plaintiff was not asked to find the third of the capital he sought to recover the 5,000*l.* Defendants said, having offered the plaintiff a third of the shares in the company, they were not liable for the 5,000*l.* His Lordship held that there had been a breach of the agreement on the part of the defendants. The penalty of 5,000*l.* was intended as a *bona-fide* alternative if plaintiff did not find a third of the capital of the company. Defendants had failed to give the plaintiff this option, and therefore on all points he found for the plaintiff for 5,000*l.*, and costs. Stay of execution was granted pending an appeal.

"Antineurasthin."

In the Divisional Court on July 27, the Lord Chief Justice and Justices Darling and A. T. Lawrence had before them an appeal by Samuel W. Harding, an officer of Inland Revenue, against a decision of the Magistrate sitting at the Mansion House, who dismissed a summons which the Inland Revenue Commissioners brought against Wm. Migge (*C. & D.*, 1908, II., 681). The information set out that Mr. Migge exposed for sale a box containing a preparation and composition to be used and applied as a medicine for the prevention, cure, and relief of disorders and complaints incident to and affecting the human body, and liable to the stamp-duty chargeable in respect of medicines under statutes—to wit, Antineurasthin—without a paper cover, wrapper, and label provided by the Commissioners of Inland Revenue. It was admitted that the preparation was sold without bearing the Inland Revenue stamp, and that the two pamphlets entitled respectively "Antineurasthin" and "Nervous Disorders: Their Prevention and Successful Treatment by Natural Nutrition," were published by the respondent. It was not disputed that the statements in the pamphlets with reference to the composition of the preparation, and in particular the result of the chemical analysis of the preparation set out in the pamphlet "Antineurasthin," was accurate in fact. It was contended, on behalf of the appellant, that the "Antineurasthin" was a preparation or officinal preparation of a lozenge, to be used as a medicine or medicament for the prevention, cure, or relief of a complaint incident to or affecting the human body within the meaning of the schedule to the Act, and reference was made to the two pamphlets in support of the contention. On behalf of the respondent it was contended that on the facts proved or admitted it was established that Antineurasthin was a food, and not a medicine or medicament, and that this was a question of fact. The Magistrate came to the conclusion that Antineurasthin, so far as it was a question of fact, was a food, and not a medicine within the meaning of the schedule, and dismissed the information.

The Solicitor-General (Sir Samuel Evans), who appeared with Mr. Finlay for the Inland Revenue Commissioners in support of the appeal against the Magistrate's decision, said the preparation was made up in little boxes.

The Lord Chief Justice: Have you tried one, Mr. Solicitor?

Sir S. Evans: Yes, I have eaten one. (Laughter.)

The Lord Chief Justice: Has it hurt you?

Sir S. Evans: No, I do not think so. (Renewed laughter.)

The Lord Chief Justice: Perhaps Mr. Avory has tried one?

Mr. Avory, K.C. (for the respondent): Long ago.

Sir S. Evans said a sample of this preparation analysed yielded the following results: Water 3.35 per cent., milk sugar 56.47 per cent., albumen 20.86 per cent., lecithin 5.1 per cent., mineral matter 4.26 per cent., and binding matter 9.96 per cent.

Mr. Justice Darling: It is composed of water, sugar from milk, some albumen, which may be the white of an egg, a little lecithin, and mineral matter, which may be radium.

The Lord Chief Justice: All I can say is that if it contains 4 per cent. radium it will be a very valuable lozenge. (Laughter.)

Sir S. Evans said the directions were that so many tablets were to constitute a dose. It could not be said when a man was taking food he was having a "dose" of breakfast. (Laughter.)

Mr. Justice Darling: What you say about it cannot affect what it is. If they sold pills made of bread, as I believe many people have done, what you say is that those pills would be a medicine?

Sir S. Evans: Yes.

Mr. Justice Darling: I see it is said that if you take these you need not rest, and to rest unfortunately implies dislocation of business. Perhaps it means the long vacation, and if we each take a box of these we need not go away. (Laughter.)

Sir Samuel Evans went on to read a long list of complaints mentioned in the pamphlet for which the article was prescribed, when the Lord Chief Justice interrupted and requested the Solicitor-General not to read any more of those "horrible things."

Mr. Justice Darling: Those are complaints which really if a person had one of them he would be unlucky.

Sir S. Evans: He would, and if he had all of them he would not be here. (Laughter.)

Mr. Justice Darling: You took one. If you felt worse I should think it was a medicine.

Sir S. Evans: I think I had better not give evidence in the matter. (Laughter.)

The Lord Chief Justice: Take a cayenne jujube, which is very good for a sore throat. Is that a thing on which duty has to be paid?

Sir S. Evans: There is an exemption in the case of ginger and peppermint lozenges.

Mr. Justice Darling: I suppose nobody could live on this and nothing else?

Sir S. Evans: I should think not.

Mr. Justice Darling: It is rather a test of food if you can live on it and nothing else.

Mr. Avory, K.C. (for the respondent) submitted that the question was entirely one of fact for the Magistrate. Those questions under the statute were always treated as a question of fact to be determined in each case. A great many doctors' prescriptions contained common salt, but salt was an article of food also. Unless a line was drawn somewhere, every glass of port wine sold might be held to require a Revenue stamp. Every egg and glass of milk might just as well be said to be medicine within the meaning of the Act because they were recommended to be taken between meals. The whole point of the pamphlets was that the defendant claimed to cure those things by food instead of by drugs. That was why it was recommended so many should be taken.

The Lord Chief Justice, in giving judgment, said the case was on the very border-line. He thought it was quite impossible to read the statements in the pamphlets and the words upon the box itself without coming to the conclusion

that this was sold as being a preparation to be used internally in order to cure certain ailments of the human body, but it was said against that view that the Magistrate had dealt with this as a question of fact. His Lordship, however, rather agreed with the Solicitor-General when he said that the Magistrate found this prescription was not, as a matter of law, to be treated as a medicine coming within the schedule. Under those circumstances the Court must deal with the matter on the facts stated by the Magistrate. It was true that many times in the literature of the pamphlets it was indicated that this preparation took the place of medicine because it was in the nature of a food, but his Lordship could not think that because it was suggested it did the same work as medicine it was not a preparation of the kind indicated and liable to duty under the statute. He therefore held that article came within the statute, and that the appeal must be allowed.

Mr. Justice Darling concurred. In his opinion a thing which really was a food was quite capable of being treated as liable to pay duty under the Act of 47 George III. c. 56. A food might be a medicine, and a medicine might be a food. It depended on how they were administered. If they applied simply plain water as a medicine, and offered it for sale as such, it would come within the meaning of the statute. It must be applied as medicine for the relief of any disorder or complaint incident to or affecting the human body. The things in question had been advertised and held out as cures for headaches and other maladies, and therefore they came within the words of the statute. The Magistrate was wrong in the opinion he came to, and there was ample evidence that what was advertised and held forth as food was in fact held forth for sale as medicine.

Mr. Justice Lawrence concurred.

The appeal was accordingly allowed.

Sale of Food and Drugs Acts.

Vinegar.

At Pontypridd on July 21, Wm. Henry Chapman, Coedpenmaen, Pontypridd, was fined 1*l.* 8*s.* 3*d.* for selling adulterated vinegar, which contained 1.5 per cent. of acetic acid.

Licensing Acts.

Sale of Quinine Wine in a Market Place.

At the Ashton-under-Lyne Borough Court on July 26, John T. Butterworth, chemist and druggist, Stretford Road, Manchester, was summoned, at the instance of the Inland Revenue authorities, for selling sweets and wines without having a licence.

Mr. C. Simpson, of the solicitors' department, Somerset House, who appeared for the prosecution, said, in opening the case, that on March 22 the defendant had a stall on the Ashton Market ground from which he sold orange-quinine wine. A bottle was purchased by an assistant-officer of Excise, and a portion of it was analysed at the Government Laboratory, where the liquid was found to be "sweets." "Sweets" is defined as being "any liquor which is made from fruit and sugar or from fruit and sugar mixed with any other material which has undergone any process of fermentation." The liquor which the defendant sold came under this definition. As the defendant was a duly qualified chemist, if he had sold a medicated wine at his shop, and had the wine been properly labelled showing that it was to be taken in doses as medicine and not as a beverage, the Board of Customs and Excise might probably not have prosecuted.

Harold Wise, an Excise officer, gave evidence as to the purchase of a bottle of wine from the defendant on the Ashton Market ground.

Robert Roger, analyst from the Government Laboratory, stated that the liquid submitted to him for analysis by Mr. Wise was a British wine, which contained 21.7 per cent. of proof-spirit. The label on the bottle described the mixture as "a most agreeable and invigorating tonic."

The defendant, addressing the Magistrates, said there was not a chemist in the United Kingdom who did not sell such wine. He, as a qualified chemist, had been selling it for thirty years, and the offence was not novel. The law said that he was perfectly within his rights in selling this bottle as it contained quinine.

The Magistrates' Clerk: Show us the section.

The Defendant: I might have brought the Act. Every chemist in the United Kingdom sells mixtures of this kind.

The Clerk: Then probably this will be a warning to them. The Excise authorities may take proceedings against them.

The defendant said that at Stalybridge his wine was taken and analysed. It was then said that the wine contained 2 grains of quinine to the ounce, and he contended that he was entitled on that ground to sell it.

Mr. Roger remarked that the defendant was entitled to sell ordinary wine provided it contained 1 grain of quinine to each fluid ounce, but the bottle should have borne a label giving the amount of the dose.

Mr. Simpson said the essential point in this case was that the wine was sold in the Market ground, where there was no control.

The Magistrates fined the defendant 10*s.*, and costs.

Pharmacy Act, 1868.

A Company Convicted under Section 15.

At the Bradford County Court on July 27, judgment was given in the action by the Pharmaceutical Society of Great Britain against T. H. Walton & Co., Ltd., Cleckheaton, for keeping open shop for the retailing, dispensing, and compounding of poisons, as reported in our issue of July 24, p. 108. His Honour now said that he had no reason to doubt the evidence given on behalf of the Society, and he therefore ordered the defendants to pay 5*l.* for selling a poison contrary to the Act. It had been urged that the practice of the Pharmaceutical Society in such cases as these was open to objection, but he would not like to take that view until he had heard what the plaintiffs had to say on the subject. The plaintiffs were an impartial body with a very large experience, and he thought it would be presumption on his part to indicate that in adopting such a practice they were doing wrong.—Mr. Beldon (for the Society) asked that costs should be awarded to the plaintiffs. Mr. Clifford Dunn (for the defendants) objected, but after a short argument his Honour gave judgment, allowed the costs of the witnesses, Mr. Tickle and Mr. Foulds, but declined to grant Mr. Moon's costs.—Mr. Beldon said he believed this was the first time Mr. Moon's costs had ever been disallowed; but his Honour held to his decision, and also agreed, in response to a request by Mr. Dunn, that the defendant company should be granted a little time in which to meet the fine and costs.

Bankruptcy Report.

Re Samuel Sayer Umpleby, 201 Linthorpe Road, Middlesbrough, Chemist's Manager.—This debtor was examined at Middlesbrough Bankruptcy Court on July 23, on accounts showing gross liabilities amounting to 3,464*l.* 8*s.* 9*d.*, of which 1,896*l.* 8*s.* 9*d.* is expected to rank against the estate for dividend, assets estimated to realise 89*l.* 0*s.* 4*d.*, and a deficiency of 1,807*l.* 8*s.* 5*d.* Debtor stated that he commenced business as a chemist and druggist at Redcar in 1875. He established a good business there, and got about 1,500*l.* from his late father's estate. He sold the business at Redcar for 1,400*l.* or 1,500*l.* in 1895, and he then started business at 201 Linthorpe Road, Middlesbrough. In 1898 he had a sleeping partner to the extent of over 250*l.*, but he paid him out about four years ago. At that time he was solvent. In 1907 he sold his business to Middleton & Co., as he was pressed for ready money. Asked if he was solvent at that time, debtor replied that he did not know, whether he would be or not. At the private examination he said he was first aware of his insolvency three years ago, but he had always been hopeful he should pull round. For the business he was paid 600*l.* in cash, which he used for paying off some of his debts and 425 1*l.* shares in the company. The latter he deposited with a Mr. Phillipson to secure a loan of 300*l.*, which was still owing. He got into difficulties entirely through speculation on the Stock Exchange. When he left Redcar he could have realised 10,000*l.* The examination was adjourned until August 20.

Deed of Arrangement.

Clarke, Herbert Renshaw, 4 Shafton Road, Victoria Park Road, London, N.E., Chemist.—Trustee, F. Clarke, Harlaxton Drive, Nottingham (wife of debtor). Dated July 21; filed July 22. Liabilities unsecured, 668*l.*; estimated net assets, 332*l.* Among the creditors are: T. F.

Bristow & Co., Ltd. (11*l.*); Crown Perfumery Co. (13*l.*); Hearon, Squire & Francis, Ltd. (17*l.*); S. Maw Son & Sons (16*l.*); Camwal, Ltd., Birmingham (12*l.*); Wyleys, Ltd., Coventry (42*l.*); Sturgess & Co., Derby (10*l.*); Hirst, Brook & Hirst, Ltd., Leeds (66*l.*); Ayrton, Saunders & Co., Ltd., Liverpool (22*l.*); Evans Sons Lescher & Webb, Ltd., Liverpool (42*l.*).

Gazette.

Partnerships Dissolved.

ANDRE, J. E. F., and LAMBERT, G. O., physicians and surgeons, under the style of Andre & Lambert, Selsey, Sussex.

The Bankruptcy Acts, 1883 and 1890.

RECEIVING ORDER.

CHAPMAN, WALTER BARTLETT, Rochdale, Lancs, surgeon.

New Companies and Company News.

The letters P.C. mean Private Company within the meaning of the Companies Act, 1907, and R.O., Registered Office.

ARTHUR J. DICKINSON, LTD. (P.C.).—Capital 10,000*l.*, in 1*l.* shares. Objects: To acquire the business of Arthur J. Dickinson, Neptune Chemical-works, Surrey Canal, Deptford, S.E. The permanent directors are A. J. Dickinson and Mrs. H. Dickinson.

PINOXIC SYNDICATE, LTD. (P.C.).—Capital 12,000*l.* Objects: To adopt an agreement with A. H. Myers for the acquisition of a certain secret formula, and to carry on the business of manufacturers of and dealers in medicines, pharmaceutical, and medicinal preparations, etc. The first directors are A. H. Meyers, G. Crawley, and W. J. Barnett.

A. TIDSWELL & Co., LTD. (P.C.).—Capital 1,000*l.*, in 1*l.* shares. Objects: To acquire the business carried on by A. Tidswell, extractors and adaptors of teeth, 29 Horton Lane, Bradford, 78 Church Lane, Shipley, and 87 Queen Street, Morley. The first directors are A. Tidswell, H. Wiseman, and Sarah J. Tidswell. Registered office, 29 Little Horton Lane, Bradford.

RATIONAL REMEDIES LTD. (P.C.).—Capital 1,000*l.*, in 1*l.* shares. Objects: To carry on the business of chemists, druggists, dentists, drysalters, dealers in medical, pharmaceutical, and household remedies, toilet, dental, and other preparations, etc. The first directors are: A. Wallace, 20 Old Cavendish Street, W., manufacturer; and J. H. Hamilton, Craigview House, near Montrose, N.B., merchant.

SULPHATES, LTD. (P.C.).—Capital 5,050*l.*, in 1*l.* shares. Objects: To acquire and work the processes for obtaining sulphate of copper and other substances by improved methods of chemical extraction invented by J. H. Thwaites and S. J. Ralph; also to acquire the business carried on by J. H. Thwaites, S. J. Ralph, G. Higgs, and C. Gray at Peterborough, as the Sulphate Co. The first directors are J. H. Thwaites, S. J. Ralph, G. Higgs, J.P., and C. Gray, J.P. R.O., Priestgate, Peterborough.

TURVEY TREATMENT CO. (1905), LTD.—Mr. Justice Neville, sitting in the Chancery Division, on July 27 made a compulsory winding-up order against this company, on the petition of a creditor for 81*l.*

PRICE'S PATENT CANDLE CO., LTD.—Subject to audit, and without making any deduction for depreciation, the accounts show a profit for the past half-year of about 32,200*l.*, to which is to be added 7,250*l.* brought forward. The directors will recommend a dividend of 15*s.* per share, leaving about 11,400*l.* to be carried forward.

CHEMISCHE WERKE ROERMOND VORM. W. MALLMANN.—The above is the new title to be adopted after August 1 by the firm of N. V. Fabriek van Chemische Producten voorheen W. Mallmann, Ruremonde, Holland. The working capital has been augmented, and the directors are W. Mallmann and H. Raab. The latter gentleman was in business as a chemist in Bavaria for many years.

HUTCHINSON TYRE. LTD.—The report of the Etablissements Hutchinson, whose British headquarters are at 70 Basinghall Street, E.C., states that the net profit for the year 1908-9 amounts to 1,333,080f. (53,323*l.*), against 1,305,579f. in the preceding year. Including a balance from last year 1,360,927f. (54,437*l.*) is available for distribution, and from this a 50f. (2*l.*) dividend will be paid on the ordinary shares and one of 30f. on the preference shares.

RECEIVERS APPOINTED.—*Caraguata, Ltd.*, J. S. Robertson, 133-135 Regent Street, W.—*Harvard's Institute, Ltd.*, J. R. Marsh, 272 Regent Street, W.

Agri-Horticultural Poisons.

Notices of Application

for licences under Section 2 of the Poisons and Pharmacy Act have been lodged with the local authorities named.

Subscribers and others would oblige us by sending information with reference to applications. Copies of newspapers containing the advertisements of applicants would also be esteemed.

ABERDEENSHIRE.—W. C. Smith, general merchant, Methlick.

BELFORD. Macdonald & Co., merchants.

BLAIRGOWRIE. J. B. McGibbon, ironmonger, The Cross.

DUMFRIESSHIRE. Fredk. W. Moffat, Kirtlebridge; Robt. E. Moffat, Rowanburn, Canonbie; John Nelson, Eaglesfield.

GLASGOW.—Kelvinside Chemical Co., Maryhill; Alexander, Fergusson & Co., Ltd., lead and colour works.

MERIONETH. Wm. J. Williams, general merchant, Trawsfynydd.

ROEHAMPTON.—H. W. Windsor, T. C. Windsor (H. Windsor & Sons), ironmongers, Roehampton Lane.

Consideration of Applications.

BERKSHIRE.—The committee appointed to consider the applications of Messrs. Sale & Son, Wokingham; Harris & Matthews, Abingdon; W. Tucker, Faringdon; W. C. Hunt, Wallingford, recommend their refusal on the ground that the public needs are already satisfied. Lists of chemists in the applicants' localities were supplied to the committee.

BLACKBURN.—The application of Messrs. Freeman, Kerr & Co., New Market Street, came before the Watch Committee on July 26, when the committee decided in favour of refusing the application. The local association has taken active steps since the application was referred back, and only two members of the committee desired that a licence be issued, while the voting on the previous occasion resulted in a tie.

LONDON.—The Public Control Committee of the County Council, after considering the applications of Messrs. Thomas Peed, Roupell Park Nurseries, Norwood Road, S.E., and Geo. Menee Smith, drysalter, 104 Southwark Street, S.E., have recommended that a licence be issued to Mr. Peed. No objections were received to either application.

NORTHAMPTON.—The Watch Committee recommend that licences be granted Mr. T. L. Wright, ironmonger, and Ald. S. Yarde, nurseryman.—No objections were received to either application.—Mr. A. M. Troup appeared before the committee on behalf of the aplicants, and submitted evidence that a considerable number of orders were received by them for horticultural poisons.

PLYMOUTH.—The Watch Committee recommend the grant of six applications, with the following scale of fees: Licences, 10*s.* 6*d.*; renewals, 1*s.* 6*d.*; inspection or register, 1*s.*; supply of copies of register, 4*d.* per folio.

WARWICKSHIRE.—A motion before the County Council on July 20 to grant two applications was defeated by twenty-five votes to twenty-three.—The motion for refusal was also rejected, and the matter referred back to the committee who had recommended against issuing licences.

YORKSHIRE.—The General Purposes Committee of East Riding County Council recommend the refusal of the application of Messrs. Mallison & Barlow, general merchants, Hessle.—Messrs. H. E. Brown, Ltd., chemists, Hessle, opposed the application.

Applications Granted.

ARMAGH.—Messrs. Walsh & McGreedy, seedsmen, Portadown.

MIDDLESEX.—Herbert J. Gibbs (J. Gibbs), ironmonger, Bedfont, near Feltham.—The application was unopposed.

TURRIFF.—At a special meeting of the Town Council on July 23, Mr. Alex. Blacklaw, solicitor, Aberdeen, appeared on behalf of the local chemists to oppose the applications for poison licences. Mr. Blacklaw said it could not be held for one moment that there was a case for granting licences in Turriff while there was sufficient competition to prevent prices being raised. In reply to Provost Melvin, he said it was not legal for unqualified vendors to sell poisons prior to the recent Act, but the sole right of prosecution had lain with the Pharmaceutical Society at their own expense.—After the petitioners had withdrawn, the Provost said that Mr. Blacklaw had not alleged any public danger arising from sales by ironmongers in the past.—Councillor Paterson said there had been no complaints of lack of reasonable facilities. If there was inconvenience let it be proved. The three chemists and one licensed fully met the public needs.—The applications were granted, an amendment against the applications not being seconded.

Applications Refused.

MIDDLESEX.—The County Council on July 22 refused the applications of Ernest Poupart, 26 London Road, Twicken-

ham, and Benjamin Tew, North Finchley, seed merchants.—Ten chemists opposed Mr. Poupart's application, and eleven Finchley pharmacists sent in objections to Mr. Tew's application.—The General Purposes Committee upheld the objections and the Council confirmed its decision.

Surrey.—Herring & Son, ironmongers. Messrs. Agnew Nicholson, and C. A. Jago successfully opposed the applications.

Interesting Items.

An advertisement in the "Coventry Standard" for July 17 claims that "Harry Sellors, undoubtedly 'the authority,' has probably by far the largest stock of poisonous and non-poisonous dips in the Midlands. . . . Mr. Sellors is always on the Coventry Corn Exchange for the convenience of farmers, and his place of business is wholesale market. No connection with any chemist, so be sure and don't go to the wrong shop."

Irish Regulations.

The "Dublin Gazette" of July 23 contained an Order by the Lord Lieutenant and Privy Council in Ireland making Regulations under Section 2 of the Poisons and Pharmacy Act, 1908, and declaring that the said Regulations shall henceforth take effect and be in force until revoked or varied by them. We print in italics the alterations from the Irish Provisional Rules (*C. & D.*, April 3, p. 520):—

Regulations under the Poisons and Pharmacy Act, 1908.

1. A licence shall not be granted to any person unless the local authority are satisfied that he is fit, by education and intelligence, to be entrusted with the sale of the poisonous substances, and has made suitable provision for the separate storage of the same in a distinct and separate part of the shop or building where he proposes to sell the same.

2. In granting licences for the sale of poisonous substances for use exclusively in horticulture, preference shall be given to nurserymen, florists, seedsmen, and other persons whose business is specially connected with horticulture.

3. No licence for the sale of poisonous substances shall be granted (*a*) to any person who is illiterate; (*b*) *to any person who is under the age of* 21 *years.*

4. A licence shall not authorise the licensee to sell or keep open shop for the sale of poisonous substances, *except from or on premises to be specified in the licence within the area of the local authority which granted it.*

5. *A licence granted to a person who shall be the holder of a licence for the sale of intoxicating liquors, for consumption on the premises, shall not authorise the licensee to sell or keep open shop for the sale of poisonous substances, except in a shop or building, or part of a shop or building which is distinct and separate from the shop or building, or part of the shop or building where the intoxicating liquors are either sold or consumed.*

6. Applications for licences and renewals of licences shall be in the forms set forth in Schedule A to these Regulations.

7. *Before sending an application for a licence to the local authority, the applicant shall send notice, by registered post, to the Police authority for the Division or District in which the shop or building is situate in which the applicant intends to carry on the sale of poisonous substances of his intention to make the application. Such notice shall be in the form set forth in Schedule B to these regulations.*

8. *A licence shall not be granted until after the expiration of at least* 14 *days from the receipt of the application by the local authority and the local authority, before granting a licence, shall take into consideration whether, in the neighbourhood where the applicant for the licence carries on, or intends to carry on business, the reasonable requirements of the public with respect to the purchase of poisonous substances are satisfied, and also any objections they may have received from or on behalf of the Police authority to whom notice shall have been given.*

9. A licence and a renewal of a licence shall be in the form set forth in *Schedule C* to these Regulations.

10. A licence shall, *unless revoked or suspended under Regulation No.* 13, continue in force for one year, *and* may be renewed from time to time, for one year at a time, subject to the same provisions as in the case of the grant of a licence, *save that it shall not be necessary to give notice to the Police authority of any application for renewal.*

11. The fees charged in respect of the grant and renewal of a licence shall be such as the local authority may determine, not exceeding, in the case of the grant of a licence, 10*s.*, *and, in the case of the renewal of a licence,* 1*s.* 6*d.*

12. Every local authority shall keep a register of the licences granted by them for the time being in force, and any person shall, at all reasonable times, upon payment of the fee of 1*s.*, be entitled to inspect, and to make copies of, or take extracts from, the Register.

13. A licence may be revoked or suspended for such term as the local authority think fit, if the local authority are satisfied that the licensee has failed to comply with the requirements of these Regulations, *or of the Arsenic Act,* 1851, or of the Poisons (Ireland) Act, 1870, *or of the Pharmacy (Ireland) Acts, so far as the same may be applicable,* or that the licensee is not a fit person to be entrusted with the sale of poisons.

14. *A licensee shall personally manage and conduct the sale of the poisonous substances which he shall be licensed to sell or retail.*

15. A licensee shall, on being required to do so by any officer of the local authority, *or any police constable* or police officer, produce his licence and any renewal thereof.

16. All poisonous substances shall be kept by the licensee in a separate drawer or cupboard *or closed receptacle,* apart from other goods, and *poisonous substances shall not be sold upon the same premises as articles of food for human consumption, unless the local authority are satisfied that convenient arrangements for their sale cannot otherwise be made, and, in that case, they must be sold at a separate counter. For the purpose of this regulation a part of a counter, which is shown to the satisfaction of the local authority, to be adequately separated from the rest of the counter shall be treated as a separate counter.*

17. A licensee shall, *at all reasonable times,* on being required to do so by any officer of the local authority, permit such officer to inspect *the premises of the licensee* and every store, or cupboard, or *receptacle* where the licensee shall keep the poisonous substances, and also to inspect and to take copies of and extracts from any book or books which it may be the duty of the licensee to keep in pursuance of the Arsenic Act, 1851, or the Poisons (Ireland) Act, 1870, *or the Pharmacy (Ireland) Acts, so far as the same may be applicable.*

18. A poisonous substance shall not be sold except in an enclosed vessel or receptacle as received from the manufacturer, distinctly labelled "*Poison*," the name of the substance, the name and address of the seller, and a notice of the special purpose for which it has been prepared.

19. Liquid preparations shall be sold only in bottles or tins *as received from the manufacturer, and such bottles and tins shall be so constructed as to bear the ordinary risk of transit without leakage and to be* easily distinguishable by touch from ordinary bottles or tins and the word "*Poison*" *or* "Poisonous" shall be indelibly marked on each bottle or tin.

20. Solid preparations shall be securely packed in such a manner as to avoid, as far as possible, the risk of breakage or leakage from transport, and the package shall contain a notice that it must be destroyed when empty.

21. For the purposes of these Regulations, the expression, "Poisonous substances," means the poisonous substances to which Section 2 of the Poisons and Pharmacy Act, 1908, applies, for the time being, *and the expression, "Police authority" means, in the case of the Dublin Metropolitan Police District, the Divisional Superintendent of the Dublin Metropolitan Police, and, in other cases, the District Inspector of the Royal Irish Constabulary, the expression, "The Pharmacy (Ireland) Acts," means the Pharmacy Act (Ireland),* 1875, *and the Pharmacy Act (Ireland)* (1875) *Amendment Act,* 1890, *and the expression "local authority" means the Council of the county or county borough in which the shop or building is situate in which a licensee or applicant for a licence carries on or intends to carry on the sale of poisonous substances.*

22. *These Regulations may be cited as the Poisons and Pharmacy (Ireland) Regulations,* 1909.

Schedule A gives the forms of application for licence and for renewal of same. Schedule B is the form of notice to the police authority. Schedule C contains the form of licence, which is the same as the form to be used in Great Britain (*C. & D.*, 1908, I., p. 559), with the references to the Irish Regulations and Pharmacy Acts substituted for the corresponding statutes and regulations in force in this country. The provisions to be set out on the back of the licence (a column and a half of the *Gazette*) and a form for renewal of licence are contained also in Schedule C.

We make the following

Notes on the Regulations.

3. Section (*b*) is new, and replaces the prohibition of a publican holding a licence (see section 5).

4. This replaces 10 in the provisional rules and now specifies the premises as well as the area.

5. This is new, and allows a publican to hold a licence if the shop or part of a shop is separated from the premises or portion thereof where intoxicating liquors are sold. The majority of the applicants in Ireland are publicans, and until now they have been entirely excluded from selling poisons.

6. Provisional rule 4, with "and shall be sent to the local authority at such time as the local authority may direct" omitted.

7. Notice to police authority replaces advertised notice in Great Britain.

8. English regulation 5.

9. Provisional rule 5.

10. Provisional rule 6, with additions.

11. No minimum fee now fixed, and renewal maximum fee reduced to 1*s.* 6*d.*

12. Provisional rule 11.

13. Provisional rule 7, with additions.

14. New, and states definitely that licensee is to conduct the sale instead of it being implied, as in the English regulations.
15. Provisional rule 8.
16. The English regulation replaces provisional rule 12, which is considerably weakened. The general merchant will now be able to comply with the new regulations.
17. Provisional rule 13, with additions.
18. Provisional rule 14. The word "Poison" replaces "Poisonous."
19. Provisional rule 15. Either "Poison" or "Poisonous" can be placed on liquid preparations, but articles must be sold as received from manufacturer.
20. Provisional rule 16 unchanged.
21. Provisional rule 17 amplified by description of various authorities.

Births.

BELLAMY.—At Agnes Road, Barnsley, July 23, the wife of W. A. Bellamy, chemist and druggist, of twins (son and daughter).

CLARK.—On July 19, at 198 Humberstone Road, Leicester, the wife of Walter S. Clark, Ph.C., A.C.G.I., of a son.

HUGHES.—On July 18, at the Pharmacy, Melksham, the wife of Ernest J. Hughes, pharmacist (formerly on the representative staff of Messrs. Southall Bros. & Barclay, Ltd.), of a son.

LAWSON.—On July 16, at 6 Broomfield Road, Headingley, Leeds, the wife of John Lawson, jun. (Daisy, Ltd.), of a son.

SIXSMITH.—On July 22, at Lynton, North End, Hampstead, the wife of J. Edward Sixsmith, chemist and druggist, of a son.

Marriages.

ANDERSON—CROUCHMAN.—On July 30, 1884, at St. James's Church, Muswell Hill, George Anderson, of Cumnock, N.B. (London representative of THE CHEMIST AND DRUGGIST), to Alice Crouchman, of Fortis Green, East Finchley, London, N. (Silver wedding.)

DESMOND—MORE.—At the Franciscan Church, Peckham, on July 26, by Father John, Dennis William Andrew Desmond, chemist and druggist, 55 Freemasons Road, Custom House, London, E., to Violet Amy, eldest daughter of Mr. Alexander T. More, 147 High Street, Peckham, S.E.

GRIFFITHS—TREHEARN.—At St. John's Church, Bulawayo, by the Rev. Canon Hallward, on June 26, Walter Griffiths, of Bulawayo, to Alexandra, eldest daughter of Mr. William Trehearn (Spratt's Patent, Ltd., London).

WHITTLE—MATKIN.—At all Saints Church, Oakham, on July 8, by the Rev. A. C. Newman, Robert Whittle, chemist and druggist, youngest son of the late Mr. George Whittle, School House, Bedlington, Northumberland, to Constance (Connie), youngest daughter of Mr. Charles Matkin, Oakham.

Deaths.

FORD.—At Queenstown, Cape Colony, on July 15, Mr. James Ford, pharmaceutical chemist, formerly of Montrose, N.B., aged forty-one. Mr. Ford served his apprenticeship with Mr. A. Davidson, Ph.C., Montrose, and passed the Minor examination in January 1890 and the Major in October 1894. He had wide experience of retail pharmacy in this country and on the Continent before going out to South Africa, when about three years ago he entered into partnership with Mr. W. Kelk Mager, Cathcart Road, Queenstown, Cape Colony, one of the leading pharmacists of the Colony. Mr. Ford was unmarried.

MCMILLAN.—At Balmore, Stirlingshire, on July 21, Anthony, the only son of Mr. Anthony McMillan, chemist and druggist, 623 New City Road, Glasgow. Aged twelve.

PERRY.—At 103 Stirling Road, Edgbaston, Birmingham, on July 21, Mr. George Edward Perry, F.C.S., pharmaceutical chemist, aged fifty-seven. Mr. Perry had been in poor health for some time. He was closely identified with Midland pharmacy since he went to Birmingham in 1875, and was for many years one of the leading members of the Midland Pharmaceutical Association, and president of it in 1887. Mr. Perry served his apprenticeship with Mr. Watkins, of Dudley, and afterwards was for a short time assistant to Mr. Matthew Dennison before coming to London as an assistant to Mr. Henry Deane, of Clapham. He passed the Minor examination in June 1872 and the Major in December 1875. The business that Mr. Perry started at 171 Hagley Road, Edgbaston, Birmingham, was a first-class retail and dispensing one, and he did a good deal of analytical work for medical men. He published a good number of papers on pharmaceutical subjects throughout his career, the most notable being on sweet spirit of nitre in 1886, at a time when that old-fashioned medicine was emerging from criticism to something approaching exactitude. Mr. Perry was twice married, and children of both marriages survive him. Our Birmingham correspondent writes: "Mr. Perry was an excellent pharmacist, a capital fellow, a good musician (organ and piano), and a Liberal Unionist in politics. The funeral took place on Saturday last, when the first portion was read at St. George's Church, Edgbaston, by Archdeacon Perowne. Many pharmacists attended, and Mr. Rudford, Secretary of the Midland Pharmaceutical Association, was one of the bearers."



MR. G. E. PERRY.

RIKER.—On July 6, at Seabright, N.J., Mr. John L. Riker, aged seventy-eight. Mr. Riker was for more than forty years a member of the firm of J. L. & D. S. Riker, drug merchants, New York, retiring in 1902.

Summer Outings.

In the Peak District.

THE employés of Messrs. A. Greaves & Sons, chemists, Chesterfield, held their annual outing on July 21, driving by charabanc through Owler Bar to Froggatt Edge. The party of twenty enjoyed an excellent tea at the "Chequers" Inn, a place famous for its home-cured ham. After exploring Froggatt Edge the party returned home by Baslow.

A Joint Picnic.

THE North Staffordshire and Wolverhampton Chemists' Associations held a joint outing on July 22, when about sixty members and their friends spent a happy afternoon at Sandon. The North Staffordshire contingent, who came by train from Stoke, were met at Sandon by the southern party, who drove from Stafford. A cup of afternoon tea awaited the ladies on arrival, much to their delight, after which a visit was paid to Sandon Park, the seat of the Earl of Harrowby. The grounds on the south side of the Park Hall command a fine panoramic view of the valley of the Trent. Stowe Church and the interesting monuments to William Pitt and Spencer Perceval were duly inspected. Tea was partaken of at the quaint "Dog and Doublet" Hotel at Sandon. Mr. Edmund Jones, President of the North Staffordshire Association, in welcoming the South Staffordshire party, congratulated Mr. Gibson on his recent election to the Pharmaceutical Society's Council. Mr. Gibson, in replying, said the Council were determined that the interests of the trade should receive due attention. Their efforts to restrict the indiscriminate granting of poison licences had resulted in finding that there is no

appeal against the decision of the local authority. He then gave an instance of apathy of a local chemist in opposing an application for a poison licence. He said that Staffordshire chemists were not open to such a charge. Mr. Dunn (President of the Wolverhampton Association) thanked Hon. Secretaries Bentley and Coleman for their successful arrangements. The Wolverhampton visitors had to leave early to catch the train at Stafford, but the northern party were able to stay and indulge in outdoor games. The North Staffordshire contingent included Mr. and Mrs. Edmund Jones, Miss Jahn, Mr. and Mrs. Oxen, Mrs. Cornwell, Mr. and Miss Smith, the Misses Charles, Mr. Challinor, Miss Hines, Mr. and Mrs. Burrell, Messrs. Saunders, Edge, Cope, Weston Poole, Corner, Amson, Moss, Brown, Arnold, and Bentley (Hon. Secretary); while among the South Staffordshire party were Messrs. Gibson, Dunn, H. Fellows, M. S. Phillips, Bowdler, H. E. Cullwick, Stanway, Goodwin, Warner, and J. H. Coleman (Hon. Secretary), many of whom brought their wives.

Cheltenham to Winchcombe.

The Cheltenham Chemists' Association made the picturesque old town of Winchcombe the centre for their annual outing on July 20. The old capital of the ancient kingdom of Mercia abounds with objects of interest, including the old castle of Sudeley (now restored), Toddington Mansion, and Stanway House, a delightful Elizabethan manor. A pleasant drive of seven miles ended in a tour of inspection over the extensive paper-mills of Messrs. Adlard. A further ride enabled the party to enjoy the hospitality of Mr. Lee Hall on the lawn of his country residence at Winchcombe. After witnessing the picking of fruits and the process of preserving them at a local works, the company then strolled through the beautiful park and conservatories of



Some names (counting from the straw hat on the left): Mr. W. H. Hill, Mr. Freshfield Reynolds (Gloucester), Mr. J. A. Thomas, Mr. John Fletcher (President), Mrs. Thomas (in striped dress), Mr. William Barron, and behind him Mr. Lee Hall, the host of the day, Mrs. Hall being in front of Mr. Barron.

Toddington Mansion. On returning to their host, Mr. Fletcher (President) thanked him for his generous hospitality. Mr. Lee Hall, in reply, expressed his great pleasure in welcoming his fellow members. It was a delighted party that reached Cheltenham about 10.30 P.M. Among those present were Mr. J. Fletcher (President), Mr. and Mrs. W. S. Glass (Edinburgh), Mr. and Mrs. Lee Hall, Mr. W. Barron, Mr. Freshfield Reynolds, Mr. and Mrs. J. A. Thomas, Mr. and Mrs. Stroud, Mr. and Mrs. Minchin, Mr. and Mrs. Wells, Mr. and Mrs. Dolman, Mr. and Mrs. Marchant, Messrs. Willis and James, Miss Jeffrey, and Mr. W. H. Hill (Hon. Secretary) and Mrs. Hill. The party were photographed by Mr. J. A. Thomas.

Personalities.

Mr. J. Murphy L.P.S.I., has resigned his position as compounder at North Infirmary, Cork.

Professor P. Kelly, M.P.S.I., has completed important external improvements to his Medical Hall at 16 South Richmond Street, Dublin.

Mr. John Wishart, M.D., D.Sc., Ch.B. (Aberd.), has been appointed honorary anæsthetist to the Newcastle-upon-Tyne Dental Hospital and School.

Miss Elsie Clarke, daughter of Mr. W. E. Clarke, pharmacist, 169 Ewell Road, Surbiton, London, N.W., has passed the London University Matriculation examination.

Mr. W. J. Leggett, 95 Boaler Street, Liverpool, is at present suffering from an affection of the eyes, which prevents him attending to correspondence as well as he would like.

Mr. J. W. White, F.L.S., pharmaceutical chemist, has concluded a course of lectures on "Systematic Botany," given by invitation of the Vice-Chancellor, in Bristol University.

Mr. A. E. Holden (Messrs. Fairchild Bros. & Foster) leaves England this week for Montreal on his annual holiday in Canada and the United States. He will return early in September.

The Tubbercurry Guardians, having failed to obtain from Mr. P. N. White, Sligo, an explanation regarding certain irregularities in the drug supply, have reported the matter to the Local Government Board.

In referring to the death of Mr. H. J. Willows, we inadvertently stated that he was manager of the laboratories of Messrs. Willows, Francis, Butler & Thompson, Ltd., a position which is really filled by Mr. E. C. Butler, Ph.C. Mr. Willows had charge of the warehouse.

Mr. F. A. Upsher Smith, pharmaceutical chemist, who, it will be remembered, went out to join the staff of Messrs. Sharp & Dohme, Baltimore, some time ago, has succeeded Dr. E. F. Kelly as assistant-manager of the laboratories, Dr. Kelly having succeeded to the post vacated by Mr. Aubrey Hill.

Mr. W. Boulton Conyngham, F.C.S., representative of Benger's Food, Ltd., in the United States, has been visiting Manchester and London this week. Mr. Conyngham will be married on August 11 to Miss Mary Audriah Biggs, of Ardnageena, Bantry, and he and Mrs. Conyngham will sail by the *Baltic* from Liverpool to New York on August 28.

Consequent upon the retirement of Sir William Dunbar from the office of Registrar-General, Mr. Bernard Mallett, a commissioner of Inland Revenue, has been appointed to succeed him, and Mr. H. G. Bartlett, I.S.O., is to succeed Mr. Mallett. We remember that Mr. Bartlett formerly was intimately associated with the administration of the Medicine Stamp Acts, and latterly has had charge of the Company Registration Department.

Mr. William Simpson, Chairman of Messrs. Wilkinson & Simpson, Ltd., 24 to 32 Newgate Street, Newcastle-on-Tyne (a business which dates back to 1760, when it was started by a Mr. Turner), had his earliest wholesale experience in it as an apprentice to Mr. Joseph Fairs, who succeeded to Turner & Akenhead. The late Mr. Wilkinson was a fellow-apprentice with Mr. Simpson. The former succeeded to Mr. Fairs on his retirement in 1872, and Mr. Simpson joined him in 1875, and in 1897 the business was converted into a limited company, Mr. Simpson being appointed Chairman of the board of directors.



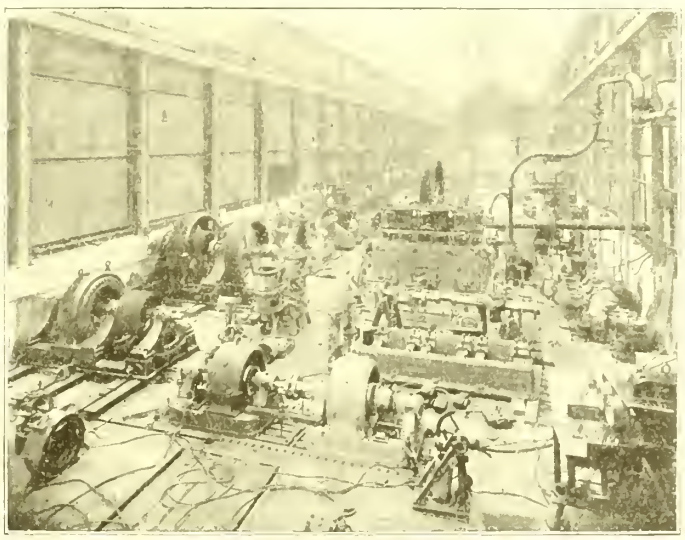
Mr. W. Simpson.

Mr. J. Jörgensen, President of the Norwegian Chamber of Commerce in London, and of Messrs. Johnsen & Jörgensen (Lim.), 26 and 27 Farringdon Street, E.C., has been decorated by the King of Norway with the first-class order of the Knighthood of St. Olav. Mr. Jörgensen is a naturalised British subject, and has obtained the authority of King Edward to receive and wear the order.

The Industries of the Tyne.



PHARMACISTS who have been in Newcastle this week have realised that the town stands for "Tyneside" as well as "coal." Newcastle and coal are proverbially synonymous, and this is not surprising, for the supremacy of the town with the surrounding district in this particular export was not challenged until Cardiff grew with the appreciation of Welsh coal. As far back as the early part of the thirteenth century there are records of coal-mining in the Newcastle district, and it seems to have continued and spread so well that by the time of Charles I. the industry had grown to an extent which made him think it worth endeavouring to obtain full control of it so that the profits might replenish his somewhat meagre exchequer. The great rebellion put an end to his schemes. At that time some 400,000 tons of coal was exported annually from the Tyne, and from then onwards the amount has increased until last year, when the total shipments were almost fifty times as great. An increase of over 15,000,000 tons per year during the last half-century has been recorded.



INTERIOR OF A TYNESIDE ELECTRICAL FACTORY (SCOTT & MOUNTAIN'S).

This wonderful growth, it will be recognised, is not merely due to the fact that the commodity is found at the doorstep, so to speak. The presence of mineral wealth will never make a district prosperous until the best, quickest, and cheapest methods of dealing with it and its transport are found and utilised. The North Country man has always been keen to experiment with likely improvements, and as a result his coal is brought to the surface at a ridiculously small cost, his railway system is developed so that he can send it all over the country and compete favourably with other coal districts, and his river has been worked upon until it has become one of the finest shipbuilding centres of the world, and shipment to all parts of the globe is a matter of simplicity.

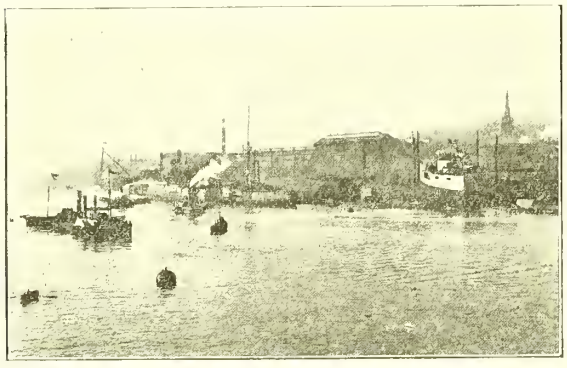
These two industries, coal-mining and shipbuilding, have practically grown up together. Long before iron vessels were dreamt of, the Tyne was famous for the seaworthiness of the ships made there, and not a few of the wooden walls of Old England were launched from its banks. Yet when the new construction still existed in theory Tyneside builders did not cling to old methods, but were quick to grasp the practicability of iron ships, with the result that their enterprise has brought them shipyards and engineering-works which are of unrivalled importance.

The pioneers of the iron-built steam collier were Messrs. Palmer, of Jarrow. Mr. C. M. Palmer, who afterwards received a baronetcy, was thought to be mad when he designed and built the *John Bowes* at a cost of 10,000*l.*, but when it was found that she could run several voyages to the one done by the wooden type and at smaller cost, his far-sightedness brought him orders in such numbers that the yard had to be enlarged and improved again and again. The firm's naval work has always been of a very high standard of excellence. From small torpedo craft to Lord Nelsons every type has been built, and at the present moment they are preparing to lay down one of the new Dreadnoughts—the *Hercules*—of the recent programme.

The revolution in coal and general transport resulting from the marvellous improvements found in the *John Bowes* was the direct means of starting many now famous firms. Of these may be mentioned Sir W. G. Armstrong, Whitworth & Co., Hawthorn, Leslie & Co., and Swan, Hunter & Wigham Richardson. The firm of Armstrong, Whitworth & Co., have the largest works on the Tyne, and probably in the Kingdom, though Vickers, Sons & Maxim, of Barrow, Sheffield, and Erith, run them very close. The Armstrong business was at first in hydraulic machinery, but it was the wonderful gun invented by Mr. Armstrong that paved the way to the present-day condition, the amalgamation of Armstrong and Whitworth, and gradual absorption of many small firms round about them, until now the works cover nearly three hundred acres. To the original hydraulic works have been added steelworks, the ordnance-works, shipyard, engine-shops, and electrical works, with the most recent development—the manufacture of motor-cars. It is rumoured,

and there is ground for the belief that the rumours are to some extent true, that they have aeroplanes now under construction, and every Tynesider eagerly hopes for the best results. They employ 25,000 hands, and each week pay out over 36,000*l.* in wages.

The second largest firm is Swan, Hunter & Wigham Richardson. They confine their attention solely to the building of ships and engines, so, although employing a very much smaller number of men, they easily beat Armstrong's in gross tonnage output per year, turning out in



Armstrong, Whitworth & Co.'s Works on the Tyne.

1907 70,000 tons to the other's 50,000. They, it will be remembered, are the builders of the *Mauretania*, a vessel of which both they and all Tynesiders are justly proud, and which is embodied in the title block of these notes. She is 785 ft. long, 88 ft. beam, and is driven by turbines of 70,000 horse-power, giving a speed of almost twenty-eight knots.

The engineering-trade is the natural outcome of the shipbuilding, so it is not surprising to find that most of the Tyneside firms manufacture machinery and fittings for use on board. The North-Eastern Marine Engineering Co., Wallsend Slipway Engineering Co., and Hawthorn, Leslie & Co. build a large number of marine engines, while at Heaton and Wallsend the Parsons Steam Turbine Co. have large works for building turbines, both for the propulsion of ships and the driving of electrical machinery. The first of these wonderful engines, from which such marvellous results have been obtained, was built at Clarke, Chapman & Co.'s, of Gateshead, where a very large and varied assortment of ships' accessories are made. Capstans, winches, windlasses, cranes, pumps (driven both by steam and electricity), and electrical machinery of every description are to be found here, a great amount of naval work being done. Electrical machinery is also made by Scott & Mountain and J. H. Holmes & Co., and several firms are employed in the manufacture of anchors, cables, chains, and hawsers of every description.

For a number of years several chemical-works, chiefly engaged in the manufacture of alkali products, carried on an extensive business here, but this industry is rapidly dying out. There are, however, several leadworks, where the imported ore is used to make red and white lead and paints, besides the useful metal articles used in the plumbing trades.

Right from its mouth up as far as is navigable the Tyne's banks have continuous lines of works, slipways, dry-docks, basins, and jetties. Night and day they are alive with workmen, and never is the air silent from the low hum of machinery and the hammering of the riveters. Truly the Tyne is a picture of industry rarely to be equalled.

Hankow Wood Oil.—The exports from Hankow during 1908 amounted to 701,873 cwt., valued at 648,576*l.*, against 470,793 cwt., valued at 539,811*l.*, in 1907. Only one-third of the export was to specified ports, of which New York was the chief, with some 6,400 tons, Hamburg taking 2,400 tons, and British ports about 1,400 tons. In his annual report, giving the above statistics, the British Consul at Hankow points out that the oil showed a marked improvement in quality and colour, there being no adulteration.

Westminster Wisdom.

A Record of Parliamentary Progress.

Daylight Saving Bill.

The Select Committee on the Daylight Saving Bill on Tuesday rejected the draft report of the Chairman (Mr. J. Tomkinson), which was in favour of the adoption of the principle of daylight saving.

Purifying Chalk Waters.

The President of the Local Government Board announced in the House of Commons on Tuesday that he is causing some scientific investigations to be made with regard to chemical means of purifying chalk waters.

The New United States Tariff.

In the House of Commons on Monday, Mr. H. J. Tennant, in the absence of the President of the Board of Trade, stated, in answer to a question, that the new United States Tariff will be published by the Board in accordance with the usual practice of the department as soon as it was enacted.

Royal College of Surgeons.

In the House of Commons on Tuesday, Dr. Rutherford asked the Home Secretary whether, in view of the attitude of the members of the Royal College of Surgeons, as shown in the memorial recently submitted, he proposed to sanction the new by-laws proposed by the Council of the Royal College of Surgeons.—Mr. Gladstone replied that the matter was still under his consideration.

Imprisonment for Debt.

The Select Committee, which has for some time past been considering, under the chairmanship of Mr. E. H. Pickersgill, the question of imprisonment for debt, concluded its investigations on Tuesday, when the Chairman submitted his draft report, which was in favour of the total abolition of imprisonment for debt; but this was rejected by one vote in favour of a report drafted by Mr. A. Rendall, which recommends, *inter alia*, that the power of committal for contempt shall not be used where the purchaser has obtained credit for luxuries or money lent. On the other hand, the duty is imposed upon County Court judges of not allowing the committal process to be used save in the case of debts incurred in regard to the necessaries of life.

Prospects of the Session.

With the probability of Parliament sitting well into October, the private member has long since realised that his chances of promoting legislation "off his own bat" in the present Session are becoming small by degrees and beautifully less. Up to Monday last no fewer than 224 public and private Bills had been introduced since the House assembled in February last, and now that Government business in general, and the Finance Bill in particular, is likely to hold the field until the prorogation the private member has realised the situation and withdrawn or dropped his particular ventures accordingly. In the huge mausoleum of defunct legislation there have already been deposited no fewer than 120 such Bills, including the Grocers' Licences Abolition Bill brought forward by Mr. S. Robinson, the Hops Bills of Mr. C. Hay and Mr. A. Fell, the Medical Acts Amendment Bill of Dr. Cooper, Mr. Hooper's Railway Contracts Bill, and Sir John Kennaway's Sunday Closing of Shops Bill. On the other hand Mr. J. A. Seddon's Restraint of Trades (Shops) Bill was down for second reading on Tuesday evening, but was not reached, the second reading of Dr. Cooper's Anæsthetics Bill has been fixed for Friday in next week, the Daylight Saving Bill is still before a Select Committee, while the Government Shop-hours Bill has not yet been introduced. Among the dropped Bills is Sir Charles McLaren's Rats Destruction Bill which was brought forward on behalf of the Society for the Destruction of Vermin. The postponement of the Budget has for the moment diverted the attention of Parliament from the serious nature of the task which confronts it before the Session can be finally wound up; but, according to the best calculations, there appears to be but little prospect of the prorogation taking place before the autumn is well advanced.

Observations and Reflections.

By "Xrayser."

Budget Prospects,

Budget protests, Budget Leagues, and the fierce discussions which these excite and encourage, may stir the outside world, but the agitations are, so far as they have gone yet, of little more than exoteric concern to the majority of British pharmacists. The Finance Bill has, however, its sharp edges for pharmacy, one or two of which have already been blunted. Our sixpenny bottles of benzine are not to be taxed, and the charge for off-licences for the sale of wine is to be arranged in something more like equitable proportion to the profits we can make out of these. But we still think we shall pay more of that sixteen-million deficit than should fairly fall to our share. The Chancellor of the Exchequer has every wish to relieve us, but the machine at the Custom-house has apparently told him that exemption for spirituous medicines and a guinea licence for the sale of medicated wines only cannot be conceded without danger to the revenue. In other words, the Board of Customs and Excise cannot trust us. Not us particularly. Their principle is not to trust anybody. Probably they do not trust the right honourable members of the Privy Council. Ninety-eight out of every hundred of us may be models of probity, but the Board have to provide against these other two. Moreover, they have records of us. When the Gin Act was passed in the eighteenth century, and by it a 50*l.* licence was imposed on retailers of potable spirits, the medicinal value of slightly flavoured tinctures for worms, gout, chills, and gripes was realised as it had never been realised before. Our old friends the apothecaries were in charge of pharmacy at that time, and probably we are better than they were. But the Lower Thames Street people think we had better not be tempted. The medicated-wine difficulty is obviously a much smaller one, and might be adjusted. Wines coming under this designation could be scheduled, the bottles in which they were sold might be capsuled or sealed, and any proved fraud severely punished. It can hardly be doubted that the guinea licence would be more productive to the revenue than the 50*s.* one is now from chemists.

Salt

and the words derived directly from it require about twenty columns of small type in the latest part of the Oxford English Dictionary (S—Sauce) for their explanation and illustration. Perhaps no other word condenses into itself so much of the history of chemistry as this little word of four letters, or its three-lettered predecessor, sal. The original salt was sea-salt, and owes its name to the Greek "hals," which at first meant the sea, and was based on the idea of movement. "Halsis" signified a palpitation or beating of the heart. The substitution of "s" for the aspirate, or *vice versa*, is a familiar etymological change. "Halen" is still Welsh for salt. In chemistry salt has meant at various times almost everything solid and soluble, but the later alchemists added the condition that it must have a taste: acid, alkaline, or, as we now say, saltish. Paracelsus and his followers regarded salt as an essential part of every metal, mercury and sulphur being the other ingredients. Salt was the body, sulphur the soul, and mercury the spirit. "Salt is that fixt permanent earth that is in the center of everything that is incorruptible and unalterable." Rouelle in 1770 first defined a neutral salt as a compound formed by the union of an acid with any substance serving as a base for it and giving to it a concrete or solid form. Lavoisier defined a salt as the union of an acid with an oxide, but when the nature of chlorine and of hydrochloric acid came to be understood it was perceived that this definition would exclude chloride of sodium itself. In modern chemical phraseology a salt is a union of an acid radical with a basic radical, or an acid having the whole or part of its hydrogen replaced by a metal.

The Numerous Sals

brought into pharmacy in the sixteenth and seventeenth centuries all illustrate the hopeful patience with which the pursuit of the essential material of natural products was sought. Sal Enixon, a name probably given by Paracelsus, was the salt left in the retort when nitric acid was distilled from a mixture of saltpetre and oil of vitriol. It was, to him, the salt out of which the spirit of nitre (nitric acid) was born. Glauber always believed his Sal Admirabile was identical with the Sal Enixon of Paracelsus. Sal Prunella was saltpetre purified by being deflagrated with sulphur. Probably the little balls in which it was moulded were tinted, or it may have been that the name was given to it from a throat disease which it was believed to cure. Sal Polychrestum and Sal de Duobus, both sulphates of potash, have fallen out of our records, but sal volatile, salt of tartar (still asked for sometimes as salt of wormwood), salt of lemons, and salt of sorrel, are familiar acquaintances; and Sal Alembroth (the name of which has never been explained, though its synonym was salt of wisdom) has been granted a resurrection by the introduction of the antiseptic treatment of wounds.

Many other Words

with pharmaceutical associations are included between S and Sauce. Sabadilla is a Spanish diminutive of *cebada*, barley, as the asagrea from which the seeds were obtained was known as the Indian Caustic Barley. Saccharin, the artificially formed benzoyl sulphimide, discovered by Fahlberg and List in 1888. Saffron, of unknown etymology further back than the Arabic *zafaran*; not connected, as has been supposed, with *çafra*, yellow. Salad oil is defined as "olive oil of superior quality, such as is used in dressing salads." This may be awkward for vendors of cottonseed oil under the appellation of salad oil. Salamanders' blood was an alchemical term for the fumes of nitrous acid. Salary was money paid to the Roman soldiers to buy their salt with. Salaeratus was an impure bicarbonate of potash used as baking-powder. Salicylic, from salix, the willow. Sandal or santal, from a Hindi *çandan*. Sandarac has borne three distinct meanings: it was the ancient name for realgar, or red sulphide of arsenic, for the varnish gum from the tree *Callitris quadrivalvis*, and was formerly used for the bee-bread taken from hives with honey and wax. No link of association can be discovered between these meanings. Santonica, so-called from the *Absinthium santonicum*. The Santoni were a people of Aquitania. Sarsaparilla, supposed to be from *zarza*, a bramble, and *parrila*, diminutive of *parra*, a vine. "The statement of many writers that the name comes from a Dr. Parillo has not been traced to any authoritative source." Sassafras may have been adapted from a native name, or it may have been a Spanish representation of the Latin *saxifraga*. The odour from the sassafras-trees is said to have been the circumstance which convinced Columbus that he was near land when he was almost despairing. Sauce and salad are both derivatives from sal, the former through *salsus*.

'SANITAS-BACTOX'

THE STRONGEST AND BEST
HOMOGENEOUS
COAL TAR DISINFECTANT.

GUARANTEED CO-EFFICIENT **20.**

1/- bottles and 5/- gallon.

Full particulars from

The 'SANITAS' Co., Ltd.

LOCKSLEY STREET, LIMEHOUSE, E.

Manufacturers of all kinds of Disinfectants.

DO NOT PASS

our NEW PRICE LIST
inserted loose in this Issue.

The Standard Tablet & Pill Co.
HOVE, Eng.

G. S. MUMFORD, FARRINGDON RD., LONDON, E.C.

No. 1 Finest Pure CRUSHED LINSEED	20/ cwt.	Finest Pure STARCH POWDER	22/ cwt.
No. 2 Pure CRUSHED LINSEED	19/ cwt.	No. 1 Finest Light Pure PRECIPITATED CHALK	25/ cwt.
Best Cleaned LINSEED (TEA)	19/ cwt.	EPSOM SALTS, E.S.S. Purified, Clean, and Dry	11/6 cwt.
No. 1 Finest Pure FULLER'S EARTH (Light Colour)	15/ cwt.	Finest Levigated "WHITE EARTH" (Toilet purposes)	18/ cwt.
Finest Compound LIQUORICE POWDER	/8 & 1/ lb.	Finest Pure TOILET OATMEAL, SPECIAL	32/ cwt.
Finest Pure LIQUORICE JUICE	/10 lb.	Finest ARROWROOT	1/ lb.
BICARB. SODA Finest	15/ cwt.	FULLER'S EARTH (In Dredgers)	/1 /2 & /6

WARRICK BROTHERS.

WILCOX, JOZEAU & CO.
49 Haymarket, London, SW
Importers and Exporters of

FRENCH and all FOREIGN PROPRIETARY MEDICINES

Price List on Application
Special Export Terms
Foreign Prescriptions
Dispensed for Pharmacists

PHARMACISTS wishing to adopt as their own an **improved High Class and Up-to-date MALTED FOOD**—Well put up—Yielding good profit, as well as offering a splendid quality and quantity to customer—apply to

GARMAN BROS., Food Specialists (Established 1868),
280 ROMAN ROAD, BOW, LONDON, E.

For matter of real interest to Pharmacists, see page 169.



2 c.c. and 30 minim, to retail at 1/- each, 9/- doz.
5 c.c. and 120 minim, to retail at 1/6 each, 14/- doz.

FLETCHER, FLETCHER & CO., Ld., LONDON.

The Pharmaceutical Week.

Every week in the year is pharmaceutical to readers of The Chemist and Druggist, but the week in which the British Pharmaceutical Conference holds its annual meeting is *the* week of the year for pharmacists of the British

Empire, because the Conference is the one pharmaceutical body in the realm which unites all with a common bond of union. Pity is it that the adherents of the Conference are numerically so poorly representative of the Empire. We dare say if a crisis were ever reached in the affairs of the body men and money would flow in, but the fact remains that in both respects the Conference is worked on the irreducible minimum principle. Britishers are so fond of getting something for nothing that the majority of those of them who are in pharmacy allow the B.P.C. to struggle in the financial billows until it floats into their neighbourhood, when they hold out a helping hand, treat it sumptuously, and see it safely off again. Perhaps our idea that the Conference is Imperial is not so generally shared as it ought to be; undoubtedly the constitution which was drafted by its founders and agreed to at Newcastle-on-Tyne on September 2, 1863, is Imperial in scope if it was not in intention, and forty-six years' experience has proved that pharmacists from Hong-Kong westward to Vancouver, and from Lerwick southwards to Hobart, find within it a common meeting-ground when the occasion requires. That is a thing worth having and paying for. When, however, we get down to the bedrock of actuality we are bound to admit that were it not, in the main, for a triumvirate of self-sacrificing pharmacists the Conference would be in peril of its existence. The Presidents and Honorary Secretaries are the men who have linked the years and the craft. The first, in 1863, were Henry Deane, Henry Bowman Brady, and John Attfield. They had to plan, and had their reward in this Imperial federation of pharmacists. They have had worthy successors, and in this year of grace 1909 James Fowler Tocher as President, E. Saville Peck and Edmund White as Hon. Secretaries, are the triumvirate to whom once more British pharmacy is indebted. It is, by the way, symptomatic of educational development in pharmacy that each of these pharmacists is a University graduate. The first principle of the Conference is the advancement of pharmacy; the second, union of pharmacists; and for the latter purpose the body is peripatetic, hence it owes much to local pharmacists who are its hosts. This week it has been exceptionally fortunate in the re-visit to Newcastle-on-Tyne, where the chemists of the district, led by George Weddell and Maltby Clague, have given the members another welcome home. The first meeting of the Conference was reported in the *C. & D.*, September 15, 1863. The report was equal to three pages of this issue, and the editorial note was exactly seven lines. We do not allege that the tenfold expansion which has occurred is the true measure of progress, but we have no reason for supposing that the proceedings now are not as good as they were forty years ago; and considering the advances in research and in channels of publicity for the results, although the Conference is not supposed to draw epoch-making scientific contributions, it still has the reputation among pharmaceutical workers in all parts of the country of providing the most convenient meeting at which all can discuss subjects of common interest and pharmacopœial importance. The work done in Newcastle this week has been good, on the whole, and the Conference goes to Cambridge next year with Mr. F. Ransom as president.

The President's Address.

In this Mr. Tocher has broken new ground, especially from the journalistic point of view, for he has furnished us with an epitome of his address. Probably it was not intended for publication, but it is such an excellent specimen of Mr. Tocher's masterly synoptical powers that we venture to give it publicity. It shows at a glance what is in the address:

1. *Introductory.*

1. Newcastle scene of birth of Conference.
2. Difference between British Pharmaceutical Conference and the Pharmaceutical Societies of Great Britain and Ireland.
3. Youthful views of inaction respecting weal of craft.

2. *The General Problem.*

1. Constitution of society and factors operating within it
2. Our duty is to know social conditions and to collect data bearing on our own calling in order to use them for advantage to craft and the public.
3. The aims of pharmacists. Driven by self interest and duty to act in public interest.
4. It is illogical to expect, *a priori*, status to be the same here as on the Continent.
5. Key to study of social problems—individualism, communism.
6. What data desirable to study and make use of in public and own interests.

3. *Retrospect.*

1. A charter granted to the intruding chemists and druggists in 1843
2. Wider powers given to chemists and druggists in 1868.
3. Pharmacy in 1868. What the Act did for the public.
4. What the Pharmaceutical Council might have done from 1868 to 1908 with respect to the standard of the Minor examination, and what it has done.

4. *The New Factor in Pharmacy—Companies.*

1. Why the communistic factor entered pharmacy, and how.
2. What has been accomplished by the Act of 1908. Companies brought within the reach of the law.
3. How the safety of the public is secured now by the State.

5. *The Advent of the Licence.*

1. The complaint as to want of facilities for purchasing poisons in Scotland unfounded.
2. The variation as to the nature of the practice of pharmacy may have had to do, at the start, with the agitation.
3. The granting of the licence an experiment. Theory and practice with regard to the granting of licences.
4. The Act or the Order in Council should be amended.
5. It is possible that the licensees may become retailers of poisons generally. A qualification safer for the public.
6. The Privy Council takes the risks.

6. *Some Economic Problems.*

1. Fluctuations in the additions to pharmaceutical and medical registers and their cause.
2. Unemployment in pharmacy.
3. The patent-medicine problem.
4. The new duty on alcohol.
5. Prices of drugs and chemicals during the past century.

7. *Prescribing.*

1. The character of prescribing in 1810, with examples, compared with prescribing in 1909.
2. Prescribing still a necessity.

8. *Education and Examination.*

1. The axiom that training should precede examination is a sound one.
2. Powers as to curriculum will be properly used.
3. Information as to educational facilities should be collected. The work begun.
4. The standard of the qualifying examination defended and the real difficulties explained.
5. The *rôles* of pharmaceutical chemists and science graduates.

9. *Pharmacopœial Revision.*

1. An organised attempt to glean pharmacists' experience desirable, by stating definite problems to men outside the Committee of Reference in Pharmacy.
2. Note on the committee's report.
3. Writer's views as to the problem of variability of alkaloidal content.
4. A word as to some definitions in the B.P.

10. *Concluding Remarks.*

1. The field of organic chemistry.
2. The effect of Dalton's hypothesis on modern chemistry.
3. The electron is to classify our experience in chemical and physical science.
4. Nature is a picture which we see, and not a thing that we know.

In these diverse paths Mr. Tocher gives British pharmacists food for thought and stimulus in the common darg, and justifies his election to the only position which British pharmacy has to give to those of her sons who have proved their ability as men and pharmacists.

The Papers.

This year the practice, commenced two years ago, of holding one session only per day, from 9.30 A.M. to 1.30 P.M., was again followed, and may now be considered to be established. The even flow of paper-reading was also varied by a debate on the question, "Should Dispensing be Confined to Pharmacists?" which was opened by the President with a paper; another was to be on "Problems of the Poison Schedule," opened by Mr. H. Wippell Gadd, who thus made his *début* as a barrister-at-law before his fellow-pharmacists. Time did not permit this discussion. In the series of notes which follow we give the briefest possible epitomes of the papers, the discussions on which are reported in subsequent pages, beginning on p. 211.

Alcohol in Pharmacy.

Mr. D. B. Dott considers that many of the official tinctures might be prepared with weaker alcoholic menstrua, and enumerated a number to which his suggestion applies, also showing how certain extracts might be improved by modification of the menstrua. The use of glycerin and acetic acid as menstrua was also dealt with.

Antimonium Sulphuratum.

Mr. F. H. Alcock dealt with sulphurated antimony from an analytical point of view and according to the requirements of the manufacture of red rubber. He has found among the impurities calcium thiosulphate (a most injurious substance in the manufacture of rubber), iron sulphide, and sand. Notes were given regarding the precautions to be observed in various stages of the assay of antimonium sulphuratum.

Antimony Sulphides.

Messrs. D. L. Howard and J. B. P. Harrison submitted a rapid process for the assay of black antimony and golden sulphide of antimony. The sulphide is fused with sodium peroxide, thus converting the antimony into sodium metantimonate. This is brought into solution, reduced to the lower state of oxidation, and determined volumetrically by means of standard iodine solution. The sulphur thus oxidised to sulphuric acid is determined by precipitation as barium sulphate. It is stated that the antimony figure should never be less than 30 per cent., and is the only trustworthy basis in forming an opinion as to the genuineness of manufactured sulphide preparations, also that the combined antimony and sulphur contents should form at least 95 per cent. of the whole product.

Bio-chemical Tests.

Dr. Wm. Martin described the methods for the physiological standardisation of drugs, tracings being given which show that a fluid extract of ergot more active than the official preparation can be produced. The standardisation of epinephrin was fully dealt with, the cardiac tonics—digitalis, squill, and strophanthus—were treated with exceptional clearness, the author, as a director of a pharmaceutical house, apparently having appreciated what the pharmacist exactly wants to know in regard to physiological standardisation of drugs.

Bismuth Salicylate.

Mr. J. P. B. Harrison has continued his work on the detection and estimation of free salicylic acid in this salt. Ether and chloroform are the best solvents for extracting the free acid with minimum decomposition of the salicylate. The first solvent is preferred owing to greater rapidity in work, but the latter dissociates salt to a smaller degree. The results obtained by one extraction are practically quantitative, being approximately one-half of the total amount. The author also showed that there are at least two salicylates on the market, one a true bismuth salicylate and the other a loose combination of base and acid.

Cacao Butter.

Messrs. W. B. Cowie and B. M. Brander gave the results of the examination of genuine and husk cacao butter and two cacao-butter substitutes. The figures for the latter are within standard figures for cocoa butter except that the soft substitute fails to comply with the Björklund ether test.

Fluid Extract of Cascara Sagrada.

Dr. Charles Symes, in a brief note on this preparation, reported that after the bark is exhausted with water the addition of ammonia solution to the marc and continuation of percolation with water provide more extractive and aperient matter being obtained. He also uses glycerin in the aqueous menstruum, and showed that the modifications suggested afford a markedly improved preparation.

Cimicifuga Racemosa.

Mr. Horace Finnemore's Conference research-paper on the constituents of cimicifuga rhizome was brief and preliminary. It simply records the action of solvents on the drug and identification of some of the constituents, a trace of an alkaloidal body being among them.

Who Should Dispense?

That in brief was the question submitted by President Tocher for the opinion of physicians and pharmacists present. He was distinctly of opinion that the dispensing of medical prescriptions should be confined to pharmacists, and proposed that a joint standing committee of members of the British Medical Association and the British Pharmaceutical Conference should be appointed, whose preliminary duties would include (1) dispensing problems, (2) prescribing problems, and (3) drug problems. Collection of data and information is all that he would ask the committee to do at first. The annual reports would give an idea, as time goes on, as to what progress, if any, has been made. Then some definite step must be taken to transfer the dispensing of medical prescriptions to pharmacists. The discussion was warm.

Emulsions Examined.

Mr. E. W. Pollard, in a Conference research, perfected a "dry" method of assaying the amount of oil in emulsions, the emulsion being mixed wth dried sodium sulphate and sand and extracted with carbon tetrachloride. This process was used for thirty-two samples of emulsions of cod-liver oil and petroleum. Emulsions dispensed from prescription were inaccurate in oil-content. The size of the oil globules varied very greatly. Acacia was found to be the best emulsifier, and the "dry" method of manipulation was specially commended. Our report of the paper is illustrated with an interesting series of micro-photographs, which show the degrees of emulsification.

Extractive and Glycerin in Galenicals.

Messrs. Naylor and Chappell's paper gave results of arduous experimental work in determining extractive and glycerin in tinctures. A distillation method was fully described. The figures showed that although low results were obtained for extractive owing to loss of volatile substances, glycerin can be estimated within reasonable limits. A table set forth results of determinations conducted upon tinctures made to imitate pharmacopœial preparations to which known amounts of glycerin were added.

Refractometric Examination of Galenicals.

Messrs. W. B. Cowie and T. O. Broadbent found the refractive indices of commercial fluid extracts of cascara sagrada to agree with the specific gravity and amount of extractive. It is suggested that the refractive index would be useful in indicating that the extractive of galenicals is free from extraneous matter.

Hydroxyphenylethylamine.

Dr. G. Barger gave a *résumé of the* work on this substance which accounts for that portion of the activity of ergot extracts which is not due to ergotoxine. The synthesis, physical constants, and physiological properties of the base were mentioned. Although less active than adrenalin, to which it is related chemically, the effect of the amine is more prolonged and less toxic. The activity of placental extracts has been shown to be due to this substance. Whether or not *p*-hydroxyphenylethylamine occurs as such in ergot is at present undecided.

Malt and Oil.

Mr. E. F. Harrison has recently examined nineteen specimens of malt extract and cod-liver oil, and finds the percentage of oil to vary from 1.5 to 30.5. The diastatic value of the extract was from 9 to 413. The percentage of maltose in the extract was between 53.6 and 75.2. The processes were given for estimating the percentage of oil and maltose.

Oil Testing.

Messrs. J. S. Remington and H. Lancaster described results they have obtained in the comparative examination of the halogen absorption of oils by the methods of Hübl, Wijs, Hanus, and McIlheney. They find that much better results are obtained by the Wijs than by the Hanus and Hübl methods, but that none of the iodine-absorption methods are so rapid as the bromine process of McIlheney, which is practically instantaneous and preferable to any of the iodine methods.

Problems of the Poisons Schedule.

Mr. Wippell Gadd dealt chiefly with the new phraseology of the Schedule, giving definitions of "poison," "alkaloid," "derivative," and "preparations or admixtures." He also showed how the percentage principle divides certain preparations of substances in Part 1 and Part 2 poisons. His definition of a "poisonous vegetable alkaloid" is: "Any alkaloid or derivative the maximum medicinal dose of which for an adult does not exceed two grains." Consequent upon this he brings ipecacuanha preparations into Part 2, but not without doubt as to his wisdom in doing this.

Strychnine and Brucine.

Mr. G. Pinchbeck dealt with the separation of these alkaloids in assaying nux vomica. He showed that by using nitric acid, sp. gr. 1.435, containing 1 per cent. of nitrogen peroxide the brucine is destroyed in a mixture of the alkaloids within fifteen minutes. Accurate results can be obtained by slight modification of the present ineffective method for the assay of nux vomica adopted by the U.S.P.

Unguentum Paraffini.

Mr. J. H. Franklin attempted to supply the want expressed in the Conference Research List for an improved basis to replace ung. paraffini, B.P. He prepared ointments by adding to white petroleum jelly 5, 10, 15, and 20 per cent. of paraffin wax (m.p. 120° F., 130° F., or 140° F.), white beeswax, bleached ceresin, or carnauba wax (eight distinct agents used in thirty-two proportions). The results were detailed. It was found that 15 per cent. of commercial carnauba wax gives an ideal, white, firm, smooth, plastic, and homogeneous ointment, complying with everything that is desired for paraffin ointment. As carnauba wax is of uncertain composition, Mr. Franklin suggests that ointments of (1) white petroleum jelly and bleached ceresin, and (2) white petroleum jelly, paraffin wax, and bleached ceresin may replace the official ointment.

Straits Settlements Pharmacy Bill.

Proposals of a startling character with regard to the sale of poisons, drugs, deleterious drugs, etc., are contained in a draft Ordinance published in the Straits Settlements Government Gazette of June 25. The draft is promoted by Dr. D. K. McDowell, C.M.G., Principal Civil Medical Officer, and extends to forty-two clauses and two schedules. It is an Ordinance to amend and consolidate the law with regard to the sale of poisons, drugs, and deleterious drugs, and the following are the more important definitions:

"Poison" means any article named and described in the first Schedule, and includes any mixture containing a poison.

"Drug" includes any medicine for internal or external use, and any patent or proprietary medicine, or any disinfectant.

"Deleterious drug" means any drug named and described in the second Schedule, and includes any mixture containing one or more deleterious drugs, but does not include such patent or proprietary articles containing deleterious drugs as may be exempted by rule made under this ordinance.

"Syringe" means any instrument or part of an instrument suitable for hypodermic injection, and includes a hypodermic needle.

Particularly, the purpose of the Ordinance appears to be to get firmer control over the use of morphine and its salts and preparations, other alkaloids of opium and their salts and preparations, and cocaine, eucaine, and their homologues and salts, these being specified in the second Schedule to the Ordinance. Clause 11 indicates that any person who sells, keeps, or exposes or offers for sale any poison, drug, or deleterious drug which does not conform to the standards (if any) given in the British Pharmacopœia shall be liable to a fine not exceeding $250. Depôts are proposed to be established for the sale of these deleterious drugs and syringes, and may only be sold to persons who hold a licence for them.

No reference is made in the Ordinance to chemists, but it is apparent that they are included amongst persons to whom licences to sell poisons, deleterious drugs, and syringes are to be granted, but no firm or body corporate is to be licensed, merely a director or some other person in the service of a body corporate or firm. The poisons covered by the first Schedule are:

Arsenic and all preparations of arsenic; all preparations of mercury except calomel; all soluble salts of lead, lead plaster (diachylon) unspread, antimony, and all preparations of antimony; carbolic, nitric, sulphuric, sulphurous, hydrochloric, and hydrofluoric acids, oxalic acid and all soluble oxalates, hydrocyanic (prussic) acid, and all cyanides and double cyanides; chloroform, chloral and its hydrate; all poisonous vegetable alkaloids and glucosides and their salts and analogues; cantharides and its poisonous derivatives; cannabis indica and all its preparations except bhang, ergot of rye and preparations of ergots; savin and its oil; croton oil, phosphorus, pierotoxin, strophanthus; all narcotic and hypnotic drugs, natural or synthetic; all preparations containing admixtures, and manufactured articles containing any of the above.

The draft contains some unusual proposals—as, *e.g.*, one under which a prescription containing morphine, cocaine, or similar substances shall not be dispensed more than once, unless the fact is expressly stated on the prescription. The penalty in regard to the illegal sale or use of

morphine and cocaine is exceedingly heavy—viz., not exceeding $2,500. It need hardly be said that chemists in the Straits Settlements have already taken steps to strenuously oppose the proposed legislation, and the Straits Pharmaceutical Association of Singapore have unanimously passed a resolution to this effect. They oppose it on the grounds (1) that it is not a Pharmacy Bill, (2) that a chemist or pharmacist is not defined, (3) that chemists have no legal status by it. On the representations of the Secretary, the Attorney-General is to accord the members of the Association an interview, when Dr. McDowell and others will hear the views of the chemists before the Bill is introduced to the Legislative Council.

Bulgarian Otto of Rose.

As already indicated in our Trade Report, this year's Bulgarian crop of otto of rose has proved to be from 20 per cent. to 30 per cent. larger than last year's. Our Bulgarian correspondent, who has gone carefully into statistics, estimates that the total crop of rose flowers this year was about 28,500,000 lb., and as the average yield of otto of rose from the flowers this year was 1 oz. from about 210 lb. of flowers, the total yield of the crop should be 135,000 oz. of pure otto; but the estimates of the exporters reveal the fact that the total output of otto is from 170,000 oz. to 180,000 oz. The inference is that there are at least 80,000 oz. of adulterated otto in Bulgaria. This fact shows how general the sophistication of otto has become, and in order to put buyers on their guard we give below Mr. Ernest J. Parry's analyses of typical samples of this season's otto, four samples being worked in whose authenticity was traced back to the flowers:

	(1)	(2)	(3)	(4)
Sp. gravity at 30°	0.8573	0.8570	0.8568	0.8570
Optical rotation	−2°30′	−2°45′	−2·40	−3°
Refractive index at 20°	1.4630	1.4629	1.4626	1.4628
Refractive index (after washing with water)	1.4638	1.4635	1.4630	1.4632
Melting-point	22°·5	22°	22°·5	22°·5
Total alcohols as geraniol	68.5%	70.5%	69%	71%
Alcohol	Absent	Absent	Absent	Absent.

The samples represent bulkings from distillations from the villages where no adulteration is practised. The odour of the samples is very fine, the perfume value being equal to or better than any of the crops within the past ten years. The demand for otto appears to have diminished within recent years, and with poor business conditions both in Bulgaria and elsewhere many of the leading firms and exporters, in view of the large output, were of the opinion that prices would be on a reasonable basis this season, say, from 16*s.* to 18*s.* per oz., and that adulterated otto would not be worth even 10*s.* per oz. Indeed, several of the best houses had already bought at about these prices in some of the principal rose-villages, but no sooner had these transactions leaked out than others went to the smaller villages, buying small lots (50 oz. to 200 oz.), paying 20*s.* to 22*s.* 6*d.* per oz. for spot cash, and promising later to advance the price to 24*s.* At these inflated prices only small quantities have changed hands, but the idea was carried out in the hope of forcing everybody to pay them. During the past two years some young and irresponsible men appear to have entered the rose business, and the consequence is that the Bulgarian market is now more of a "gamble" than ever. Speculation and sophistication are rampant and active. Small wonder is it then that the demand for natural otto has declined during the past two years by, it is estimated, 40 per cent. On the other hand, the use of synthetic otto has increased.

For these reasons there has been no substantial reduction in the price of otto, but meanwhile it is anticipated that the present artificial prices will not be of long duration, and about September they are likely to be on a more normal level. As it is, those consumers who have small initial orders to place are for the present looking on. Curiously enough, the "bull" party in Bulgaria, while "bulling" the home market, are "bearing" it abroad, and offer "exquisite grade" otto at 20 per cent. below the price they pay for it in Bulgaria. *Autres temps, autres mœurs.*

"Qualified Army Dispensers."

This expression in the Poisons and Pharmacy Act has brought us an inquiry from Australia as to whether it includes compounders in the Colonial forces. We hear of a case where a chemist in Australia desirous of registering as a chemist in Great Britain thinks he sees his way to that end by becoming an army compounder out there. The same idea has influenced others to take up work in the local forces.

Inspectors of Explosives' Report.

The thirty-third annual report of the inspectors of explosives under the Explosives Act was issued last week. The number of fatal accidents by fire or explosives brought to the notice of the department during 1908 was forty-four, which is less than the decennial average. Five of these cases occurred during the manufacture or keeping of explosives. There were, in addition, some 402 persons injured by explosives. Particulars are given of the cases referred to. The report of the chemical advisers (Messrs. F. H. Dupré and P. V. Dupré) is included, and contains some remarks on mercury in explosives in reply to criticisms to which these chemists have been subjected. Messrs. Dupré maintain that the presence, in however minute a proportion, of an unnecessary ingredient which may be objectionable justifies the rejection of the material containing it regardless of the quantity required to do actual harm. Tests carried out on samples to which there is no reason to suspect a deliberate addition of mercury have convinced these workers that it is highly improbable that the test will detect such mercury as may find its way into the explosive in the ordinary process of manufacture. Attention is drawn by the inspectors to the dangers arising from the practice of cleaning gloves, blouses, and other articles of apparel by immersion in open bowls of petrol without taking precautions against ignition of the vapour. In the accounts of accidents from benzine we note a case where an assistant to a Liverpool firm was filling small bottles from a jar of benzine, which was accidentally broken. The vapour travelled upwards through a hole and became ignited at a stove on the floor above. These cases emphasise the need for always exercising great care in handling petroleum spirit.

Among the goods exported from Genoa during 1908 were 13,503 tons impure tannic acid, 829 tons calcium carbide, 395 tons glycerin, and 587 tons raw tartar.

The exports of liquorice-root through the port of Alexandretta during 1908 amounted to 20,672 tons, valued at 158,510*l.*, against 2,963 tons (21,645*l.*) in 1907 and 8,448 tons (65,352*l.*) in 1906. The shipments were absorbed by the United States.

Chinese Albumen and Egg-yolk.—At present there are eight albumen and egg-yolk factories in Hankow, of which three are British, three German, one Belgian, and one French. Last year Hamburg took about 60 per cent. of the egg-yolk, of which the destination was specified, and Antwerp about 20 per cent., while Havre and Marseilles together accounted for 10 per cent. Only insignificant quantities found their way to the United Kingdom. Hamburg and Antwerp were also the chief destinations of albumen, the total exports of which from Hankow in 1908 were 6,395 cwt., valued at 27,644*l.*, compared with 9,540 cwt., valued at 31,319*l.*, in 1907. Of egg-yolk the exports were 32,163 cwt., valued at 18,243*l.*, against 28,722 cwt., valued at 28,240*l.*, in 1907.

Circulars and Price Lists inserted in this Jubilee Issue as Insets.

WE have the pleasure of presenting our readers to-day with as fine a series of insets as have ever been distributed to the drug-trade of the British Empire. It is not necessary to repeat here what has already been said on p. 154 regarding the origin of this method of promoting business relations between merchants and manufacturers and the buyers and users of their products. As regards our own departments of commerce and industry, we claim that The Chemist and Druggist originated and developed the method. It has endeavoured to maintain a high standard of artistic excellence in inset-production; it has inculcated the primary principle that advertisers should aim to make their insets show the merits of their goods, their appearance and price, and it provides the principal factor in securing Results—distribution in a popular trade-journal whose subscribers and readers at home and abroad are unrivalled in number and buying-power.

To-day's insets are also a tribute to our Jubilee. We venture to say this, for much care and thought (not to mention coin of the realm) has been expended by the advertisers in their production; and had the originators of the series aimed to reflect outstanding features of 1909 drug-trade, pharmacy, and their allied branches, a better representation would have been difficult to arrange.

We commend the series to our readers, and, as a preliminary to profitable use of them, we append brief notes describing the nature and contents of each inset. Profit-making in pharmacy and the drug-trade depends nowadays as much upon buying and offering to customers what is new as upon what tradition tells the people they can get at the chemist's. There are fashions in physic as in other things, and there is not a living to be had in the "blue pill and black draught" class of goods. The "little liver-pill" has made more money for living chemists. So is it in most departments. The chemist must be ever on the outlook for new money-makers, new things that will help to make his place of business more attractive, new terms of purchase, and new attractions for buyers. All these will be found in to-day's series of Insets.

To facilitate reference we append the pages between which the units of the series will be found.

Allen & Hanburys, Ltd.,

Bethnal Green, London, E., who have subsidiary companies in Cape Town and Durban (South Africa), Sydney (Australia), Niagara Falls (N.Y.), and Toronto (Canada), besides agencies throughout the world, insert an exceedingly artistic booklet, wherein four distinct series of toilet-preparations, packed drugs and domestic medicines, perfumes, and toilet soaps are displayed in the windows of a modern pharmacy. The pharmacy is a model shop-front, and the ingenious manner in which Messrs. Allen & Hanburys thus present coloured facsimiles of their packed specialities is a new departure. The pictures are executed by the three-colour process, and we understand that the printing has been done in the firm's own factory. The inset also forms a condensed price-list of their products, the whole giving our readers an idea of the great resources of the company in the production of all galenical and compounded preparations for chemists. (Inserted loose.)

The Antineurasthin Co.,

St. Botolph House, Eastcheap, London, E.C., offer to the trade two notable specialities in Pulchrit and Antineurasthin. The former is an invisible face-powder which, in addition to protecting the skin, acts as a cosmetic by the removal of blemishes. Dr. Hartmann's Antineurasthin is a brain and nerve food, which retails at 4*s.* 6*d.* The circular fully describes the merits of both these products, how they are placed before the public, and gives the terms upon which retailers are supplied. (Pp. 148 and 149.)

Baiss Brothers & Stevenson, Ltd.,

Jewry Street, London, E.C., in a 4-page circular, epitomise the characteristics of some of their leading products—chemicals for ice-makers, zinc oxide, beechwood creosote, pepsin, Dr. Nesbit's "circloids," apiol "circloids," Dr. Mackenzie's foods, santal perles, sulphuric acid, coca extracts, "krysyl," "pinesyl," concentrated vinegar essence, and cod liver oil emulsion. The various styles in which the last-named is put up are shown. The variety of labels and bottles for cod-liver oil emulsion offers a choice of design, and prevents clashing with the products sold by neighbouring chemists. (Pp. 32 and 33.)

Bausch & Lomb Optical Co.,

19 Thavies Inn, Holborn Circus, London, E.C., insert one of the most interesting circulars in this Jubilee issue. It contains illustrations or particulars of their newest scientific apparatus. These are the B.H. microscope, dissecting microscope, microtomes, centrifuges, laboratory glassware, photographic shutters, Baloptican projection apparatus, photo-micrographic apparatus, engineering instruments and spectacle-lenses. Opticians and refractionists should devote special attention to this inset. (Pp. 64 and 65.)

H. Bronnley & Co., Ltd.,

Acton Vale, London, W., have a charmingly produced circular regarding Courvoisier's perfumery and toilet soaps, the revised prices necessitated by the increase of the spirit-duty being indicated. For those who do not wish to pay spirit-duty attention is directed to the new "C.C." perfumes, which consist of the essential parts of each perfume without the spirit. We already have had an opportunity of recommending these "C.C." perfumes, and extended experience of them endorses our initial impression. Full particulars are given as to price and style. (Pp. 32 and 33.)

Brunner, Mond & Co., Ltd.,

Northwich, Cheshire, in a pink inset, tell of the advantages of "mineral-water bicarbonate" over whiting for the production of carbonic-acid gas in the manufacture of aërated beverages. Instructions for use are given, so that manufacturers can see that no complication is involved in employing sodium bicarbonate. A special offer is made which will enable an experimental trial of the method at small cost. (Pp. 64 and 65.)

W. J. Bush & Co., Ltd.,

Ash Grove, Hackney, London, N.E., are one of the houses who advertised in the first issue of the *C. & D.*, and their inset advertisement in the present one, consisting of two insets, is a striking contrast to the 1859 announcement, showing as it does the artistic methods of to-day. In the first one (headed "Ye Oldeste Essence Distillers") we have a representation of the globe as a support to the Bush Fruit Essences, and on the back of this the works of the firm at Messina are limned on a lemon, soluble essence of lemon and oil of lemon being specialities of the house. The second inset was impossible in 1859—first, because at that time the art of perfumery had not advanced so far as to be able to produce a carnation perfume such as that of Buisson Frères, to sell at 1*s.* 6*d.* per bottle; and, second, because the three-colour printing process by means of photo-engraved blocks was still unthought of. It is by this process that the perfume inset has been produced, and it is so pretty that we expect that thousands of chemists at home and abroad will use it as a showcard. The carnation perfume has caught on well this season, being fragrant, persistent, artistically put up, and moderate in price. (The insets are between p. 32 and p. 33.)

Butler & Tanner,

the Selwood Printing Works, Frome, in No. 1 of their "Talks on Printing," insist upon the importance of distinctive letter headings and stationery to business men. The headings should have individuality, which is ensured by designing the matter specially for the firm or business for which it is desired. The inset is an example of work done by the firm; in fact, it is a letter addressed to our readers such as Butler & Tanner can design for chemists to their customers. (Pp. 180 and 181.)

Clark's Salesmanship Book Dept.,

1, 2, and 3 Chancery Lane, London, W.C., advertise the book "Successful Salesmanship," by Mr. H. Holford Bottomley. The purpose of the book is to show how a business man can increase his returns and make bigger profits. Most people are in business for the purpose of making money, so that the book will appeal to a pretty large *clientele*. Part of the inset is arranged as an order form for the book and agreement to refund the money in three days if the receiver is not satisfied with his bargain. (Pp. 148 and 149.)

The Crown Chemical Works, Ltd.,

Marsh Gate Lane, Stratford, London, E., insert a price-list of "Crown" brand compound essences for making perfumes, these representing favourite perfumes *minus* alcohol. Besides, they are makers of other perfumery products required in compounding such toilet requisites as face-powders, brilliantine, etc., and as successors to Scott & Co., Johnson & Hooper, Ltd., and Tuson's Disinfectants Co., they offer various chemicals. (Pp. 148 and 149.)

Jules Denoual & Co.,

Carlton Works, Asylum Road, London, S.E., commemorate the jubilee of the foundation of their business by inserting a 56-page illustrated price-list of their manufactures. Chemists' confectionery of all kinds (official, hospital, and original) are a leading line with them, and sixteen pages of the list are occupied by quotations and representations of the kinds and styles. Then follow ten pages about capsules and perles, of which Jules Denoual was one of the first, if not the first, large maker in London. He began to advertise them in the *C. & D.*, September 15, 1860—large capsules in boxes of thirty-six, and small capsules in boxes of fifty—*e.g.*, Copaiba Capsules, No. 0, 6*s.* per doz., 9*s.* per 1,000; to-day the prices are 5*s.* 3*d.* and 9*s.* Fifteen kinds (including ether perles) were offered in 1859; to-day—well, count them, please. After capsules and perles the list deals with compressed tablets (six pages), suppositories, pessaries, and bougies; then a varied assortment of specialities, including Tasmanian and other eucalyptus oils, and concludes with lists of Friederich's dentifrices and Claude Raymond's perfumes, the whole being beautifully illustrated. The list is enclosed in a crimson cover, and is inserted loose.

R. T. Dunn,

5 Oswald Street, Glasgow, one of the oldest manufacturers of gelatin capsules in the world, makes a special announcement regarding a new series of packed "own-name" capsules, which are reserved for chemists' sale. These capsules are packed in enamelled metal boxes of new design, a facsimile of the labelled box being shown on both the front and back pages of the inset. It will be noticed that a space is reserved on the label for the chemist's name. The prices of the leading capsules of the series are quoted. (Pp. 148 and 149.)

Edwards' Harlene Co.,

95 and 96 High Holborn, London, W.C., make their inset the medium for announcing particulars of a window-dressing competition in which prizes amounting to 160*l.* are offered, with a further sum of 40*l.*, to be divided among the actual dressers of the winning windows. The remarkable success of the Harlene hair drill is one of the outstanding features of recent newspaper advertising. The drill has served to instil into the public mind the importance of systematic use of toilet-preparations by those who have thought for the preserving of their hair, or who desire to get a new crop. A price list of the Harlene preparations is given in the inset, as well as a reduced facsimile of a page advertisement in the "Daily Dispatch." (Pp. 64 and 65.)

Erasmic Co., Ltd.,

Warrington, remind chemists of the Erasmic Soap window-display competition, which is in progress, and give particulars of their other leading lines in toilet soaps and preparations. The prizes in the competition amount to 250*l.*, but in addition there is a scheme by which purchasers of certain quantities of Erasmic Soap are given a special display allowance. The sale of Erasmic Soap leads to the demand for other erasmic specialities, such as shaving-stick, tooth-powder, and face-powder, of which particulars are also dealt with in the inset. (Pp. 64 and 65.)

Eucryl, Ltd.,

Hull, make a special offer in regard to Eucryl tooth-powder, an antiseptic dentifrice which is protected in price, and the assured profit on it is higher than usual. The company offer a dozen boxes free with all first orders for three dozen, provided that the powder is displayed on the counter, and the same is given with repeat orders of six dozen. An order form is part of the inset, and should be used by readers who write direct. (Pp. 64 and 65.)

Evans Sons Lescher & Webb, Ltd.,

London and Liverpool, devote an inset to Hawley's Counter Adjuncts, including toilet articles, summer specialities (salines, etc.), toilet preparations, household remedies, malt-and-oil and cod-liver oil emulsion. The list is priced, and particulars are given of the size of the package, while finely produced half-tone engravings give a good idea of the high-grade manner in which the firm pack their adjuncts. In this regard they keep pace with the taste of the time, for, although many of the Hawley products are favourites of another generation as well as this, Messrs. Evans do not hesitate to bring them up to date when that is an advantage, and newcomers are all in the latest modern style. (Pp. 32 and 33.)

Fickus, Courtenay & Co.,

St. Dunstan's Buildings, London, E.C., insert a circular, printed on an ideal paper, regarding eau de Cologne, by Johann Maria Farina, Jülichs Platz No. 4, for which they are the agents in England and Wales. The inset includes an offer of a showcard, and on the reverse is given a facsimile of the 12-oz. stoppered decanter of eau de Cologne, which is appropriate for presentation. (Pp. 32 and 33.)

Findlater & Co.,

London Bridge, London, S.E., the agents for so many Continental natural mineral waters, insert a price-list of them, which can be torn out for hanging up at the desk by clasps provided. The quotations are for free delivery within the London area, and carriage free to

other parts of the Kingdom, either in original cases or in the smaller quoted quantities. (Pp. 64 and 65.)

Fletcher, Fletcher & Co., Ltd.,

Holloway, London, N., send the trade a varnished Vibrona showcard in colours, for the purpose of advertising this "ideal tonic-wine." A remarkable photograph of an equally remarkable Vibrona window-display is printed on the reverse of the inset. The window is in the Edinburgh consultants' district, and the display is doubtless a reflection of medical favour, for Vibrona has the special merit of being a scientific galenical preparation, incorporating all the alkaloids and natural acids of cinchona-bark in a form which obviates the production of tinnitus aurium. (Pp. 32 and 33.)

Wm. Gardner & Sons (Gloucester), Ltd., Gloucester, give particulars of the various "Rapid" sifters and mixers which they manufacture. It should be noted that each trade has its special kind of sifter and mixer, modifications being introduced according to the material which is operated upon. The list shows how the details are adapted, but it does not exhaust the varieties. Manufacturers can obtain drawings of machines for any particular purpose. (Pp. 180 and 181.)

John Gosnell & Co., Ltd.,

the well-known perfume manufacturers of London, Paris, Bombay, and Calcutta (the headquarters being the fine new buildings in Blackfriars Road, S.E., described elsewhere in this issue), insert one of the most artistically printed illustrated price-lists which have ever been sent out to the trade by this means. Every page of this catalogue is a faithful reproduction of the original carefully studied design, and the effect is the result of combining typographical simplicity with fine half-tone illustrations of bottles or other packages in a floral border harmonising with the goods. The firm's perfumes, toilet preparations and soaps are dealt with so adequately that buyers can order from the catalogue with as much confidence as from a traveller's samples. Particular attention is called to the later specialities, "Society" eau de Cologne and perfume, "Cherry Rose," "Jewel of Asia," and "Violette Sublime." The catalogue is inserted loose.

D. Grant,

shopfitter, St. James Place, Edinburgh, devotes his inset to illustrations of the interior of a pharmacy which he has recently fitted up for Mr. Stark, Gatehouse, Kirkcudbright, and interiors of the pharmacies of Mr. Kemp, Dalkeith, and Mr. Fisher, Leith Street, Edinburgh, all of which show that Mr. Grant combines artistic design with the solidity and finish for which he has a high repute. Mr. Grant will send an illustrated pamphlet post free to any reader of THE CHEMIST AND DRUGGIST who writes to him for it and mentions that the *C. & D.* is the source of his information. (Pp. 148 and 149.)

F. W. Hampshire & Co.,

Riverside Works, Derby, are manufacturers of the "Wasp fly" band, an ingenious sticky fly-paper put up in an oblong package, 4 by ½ by ½ in., and wrapped in crimson paper. Their inset has an exact representation of the packet, and also illustrates how easily the sticky band, 26 in. long and 4 in. wide, is drawn from the packet. We have tried it, and can certify that it is as easily done as it looks, which is the main thing for customers; while for retailers the point is that the bands are clean stock that sells well. (Pp. 180 and 181.)

C. J. Hewlett & Son, Ltd.,

Charlotte Street, London, E.C., insert in the Colonial and Foreign Edition of this issue a beautiful illustrated price-list of packed goods, embracing dentifrices and domestic medicines, hair-preparations, toilet-articles, such as glycerine-and-cucumber and face-powders, cod-liver oil and its emulsions, and effervescing preparations; and they appropriately remark that "These reliable and charming preparations form a positive attraction to the up-to-date chemist." Many of the illustrations are coloured facsimiles of the originals, as is noted on another page.

Ichthyol Co.,

Cordes, Hermanni & Co., Hamburg, again figure the original tin and labels of ichthyol, the purpose being to familiarise chemists with the original packages and prevent mistaking other products for ichthyol—the success of which in its twenty-five years' existence has brought forth imitations. The pharmacological notes on the back of the inset are useful to dispensers. (Pp. 148 and 149.)

Kingsley and Thackeray Hotels, Ltd.,

have an inset giving photographs of the Thackeray Hotel (Great Russell Street, London, W.C.) and the Kingsley Hotel (Hart Street, Bloomsbury Square). These modern hotels are well appointed and conveniently situated for visitors to London. Chemists from the country and the Colonies find the hotels homelike and moderate; the fixed charge rate without extras enabling all to judge in advance approximately what the hotel bill will be, and to rob a holiday in London of its dread. (Pp. 64 and 65.)

McKesson & Robbins,

New York (London Agents: S. Maw, Son & Sons, 7 to 12 Aldersgate Street, E.C.), have an artistic inset regarding the "McK. & R." capsuled pills, a selection of formulæ being the principal feature. Calox, "the oxygen tooth-powder," is the subject of the end page. This scientific dentifrice is growing in popularity chiefly because dentists prescribe it and users like it. The British depôt is with Mr. A. C. Wootton, 14 Trinity Square, London, E.C. The picture and note about Priestley on the inset are particularly appropriate in connection with Calox. (Pp. 148 and 149.)

May, Roberts & Co., Ltd.,

7, 9, and 11 Clerkenwell Road, London, E.C., insert a 16-page illustrated price-list of the turned-wood boxes made by E. B. Estes & Sons, New York, for which they are sole agents for Great Britain and Ireland. Messrs. Estes are the most extensive manufacturers of turned-wood boxes in the world. In this inset are given illustrations of the most popular kinds of these boxes, which are turned from white birch and are consequently free from odour, so that they are especially suited for chemists' use and for toilet preparations. Prices are given, from which it will be seen that the boxes can often with advantage replace cardboard or tin packages. The list is well worth studying. (inserted loose).

Mawson Filter Co.,

Newcastle-on-Tyne, devote their inset to the well-known Mawson filters and Majax. The latter is a compound sugar of milk for sweetening and strengthening infants' food. When added to cows' milk, according to the directions, an exact equivalent of mothers' milk is obtained. The healthy-looking child whose portrait figures on the inset is a living proof of the benefit of Majax. We mentioned a week or two ago that the filter was invented by Mr. George Weddell, the Newcastle pharmacist, who is entertaining the British Pharmaceutical Conference this week. It is distinctive among water-filters in removing organic matter which is in solution. (Pp. 64 and 65.)

S. D. Page & Sons, Ltd.,

Norwich, insert a circular containing particulars of the Britonian solid-back hair-brush, the feature of which is that each knot of bristle is secured in a solid back by means of a patent fastener. The makers claim to have eliminated by their method of manufacture the defects of the older patterns of brushes, and as the Britonian can be washed without any risk of injury a distinct advantage results. A postcard forms part of the inset, and *C. & D.* subscribers are invited to fill it in and post it in order to get an illustrated price-list of the brushes. (Pp. 64 and 65.)

Papier Poudre, Ltd.,

23 Somerset Street, London, W., reproduce in colour-facsimile on their inset the outside of the new 4½*d.* book of Papier Poudré. Upon orders for a gross the name and address of the retailer are printed free of charge. Particulars are also given of the other sizes and styles in which Papier Poudré is packed, the new 6*d.* shaving-pad being a noticeable addition. This form is suitable for introducing to gentlemen for use after shaving. (Pp. 32 and 33.)

A. & F. Pears, Ltd.,

71-75 New Oxford Street, London, W.C., soapmakers by appointment to both the King and Queen, have an inset which gives trade terms for the well-authenticated Pears' soap. The revival on the hoardings of the artistic advertisement of this company has helped on the sale of the soap, and many chemists who have not hitherto bought direct will be able to do so, as a 5*l.* order obtains the maximum discount, this being the manner in which the firm have for twenty years or more placed the humblest retailer on the same footing as to price with the big stores. (Pp. 32 and 33.)

Rudduck & Co.,

262 Old Street, London, E.C., give illustrations of some of the shopfittings in the manufacture of which they are specialists. This inset will be of interest to chemists who are fitting up new pharmacies or embarking on a campaign of renovation of an existing pharmacy. The prices given are helpful in preparing estimates of the cost of projected alteration. (Pp. 180 and 181.)

Franz Schneider & Co.,

51-53 Stamford Hill, London, N., are manufacturers of embossed labels for chemists and other traders, so that they are able to present our readers with a specimen sheet of their actual products—a series of red and gold seals and labels typical of what are now being used by the leading houses. They make a speciality of chemists' labels and invite inquiries. (Pp. 64 and 65.)

John A. Smith,

Bangor House, Shoe Lane, London, calls attention to "Gloria" tonic, a cure for rheumatism and gout. The reverse of the inset is a rather striking map of England and Wales, bearing on each county a county testimonial to the preparation, and the world's opinion of "Gloria" forms the ocean surrounding the islands. (Pp. 148 and 149.)

Spottiswoode & Co., Ltd.,

5 New Street Square, London, E.C., insert a dainty circular printed by themselves, which tells "About Printing." That effective printing does not depend altogether upon outlay is the message conveyed, with the reasons why this old-established house keeps abreast of the times in every detail of the printing business. (Pp. 180 and 181.)

Spratt's Patents, Ltd.,

24 and 25 Fenchurch Street, London, E.C., have picked out from their varied manufactures of foods for dogs "the very lines for chemists"—namely, "Ovals" and "Midgets" of fruit, malt and cod-liver oil, malt-milk, meat-fibrine, and charcoal biscuits. In an interesting note appended to a picture of Spratt's factory it is stated that Mr. James Spratt took out his patent for dog-biscuits in 1862. The factory which he had then was small, and when we look at what it has grown to we are reminded of the first illustration on p. 143 of this issue and the one in the centre. (Pp. 180 and 181.)

The Standard Tablet and Pill Co.,

Hove, Sussex, England, insert a 24-page illustrated price-list of their tablets, "solvellæ," curdled-milk tablets, protected-price tablets, packed pills, glycerin suppositories, pessaries, dog-pills, capsules, and pills in bulk; and at the end there is a list of their new series of toilet-articles. The list is comprehensive, and besides illustrating the styles of packing and quoting prices, it contains a series of personal observations and notes. The firm is noted for its combination of competitive prices with standard quality of products. (Inserted loose.)

Stevenson & Howell, Ltd.,

Southwark Street, London, S.E., advertise their soluble essences by means of an inset of striking artistic merit. The S. & H. essence of stone ginger-beer—shown in facsimile of a bottle of the essence, a bottle of the beer and a tempting tumblerful of it—produces ginger-beer by simple aëration equal in flavour and piquancy to the best brewed ginger-beer, but with a great saving of time and trouble. Soluble essence of lime-juice and soda is described on the reverse of the inset. It is another of Messrs. Stevenson & Howell's triumphs. (Pp. 64 and 65.)

G. F. Sutton, Sons & Co.,

Osborne Works, Brandon Road, King's Cross, London, N., give particulars of Sutton's compound cream of ammonia, which as a detergent finds many uses in the home. The company offer to send prices, samples, and particulars of a bonus system to those who are interested in this preparation. (Pp. 180 and 181.)

Viscose Development Co., Ltd.,

3 New Court, Carey Street, London, W.C., give particulars of the unique Viscose bottle-caps which are replacing the older methods of capping bottles of perfume and toilet-preparations. When the cap is dry it forms an air-tight and spirit-tight cover for the cork or stopper of a bottle which is equal or superior to the best leather capping. The caps are obtainable in opaque white, red, blue, and green. (Pp. 32 and 33.)

Watford Embossing Co.,

Watford, Herts, attach specimens of their work to their inset, which is, taken as a whole, a businesslike proposition to chemists. They produce covers for booklets, catalogues, price-lists, and other advertising material by the embossed-printing process, the specimens illustrating styles. They also make embossed seals, and do the printing that chemists require in the way of booklets, calendars, Christmas cards, etc., and a glance at their inset will show that they do the work well. (Pp. 32 and 33.)

Insets for 1910.

The next occasion on which circulars, price-lists, or other printed matter similar to those here described will be received for distribution in The Chemist and Druggist will be on January 29, 1910. The Winter Issue of the year will be published on that date. It is desirable that all who think of having an Inset in that issue should write to the Publisher of the *C. & D.*, 42 Cannon Street, London, E.C., for printed particulars to guide them and printers. Insets must be within certain limits of size.

Information Wanted.

Inquiries for the names and addresses of manufacturers, or other trade information, not traceable by reference to the advertisement-pages of "The Chemist and Druggist" and the "C. & D. Diary," or not filed in our private register, are inserted here free of charge. Postcard or other replies to any of the subjoined inquiries (addressed to the Editor "The Chemist and Druggist," 42 Cannon Street, London, E.C.) will be esteemed.

118/36. Present address of Carnot Frères, perfumers, London.

122/34. Who are the makers of Cupel trays "LB and thistle" mark?

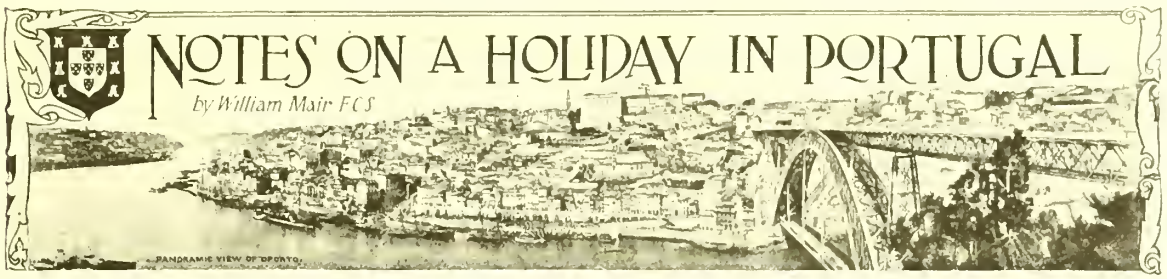
122/45. Who are the makers of "Volesen," or where can it be obtained?

119/72. Where can Wainwright's lime juice and glycerin be obtained?

121/59. Address of makers of "Grip-tight" mounts for soothers, or similar patent.

121/33. Manufacturers of or agents for Gordon & Walker's feeding-bottles and Freeman's feeding-bottles.

121/8. Agents in this country for the Davidson Rubber Company's "Near-Nature" Nipple—a teat of special shape.



A SHORT holiday tour through "Fair Lusitania" gave me the opportunity of obtaining a glimpse of the practice of pharmacy there, as compared with our own, and also of ascertaining, on the suggestion of the Editor, why the imports of British pharmaceutical products into Portugal, our oldest national ally, are so comparatively small. The actual figures in the latter connection, which I gathered from the "Estatistica Commercio Especial," are quite surprising. The latest return published was 1904; the quantities are in kilograms.

—	Pilules, dragees, capsules, and medicinal extracts.	"Medicamentas, globulos, granulos, lentillhas: productos congeneres."	Pastillhas.	Simple medicaments, not specified.
France...	4,348	96	1,396	25,024
Germany	350	4	102	3,991
Great Britain ...	48	2	189	3,413
United States ...	5	£3	24	2,081
Spain	46	—	14	782

There are also imports from Belgium, Italy, and other countries. The import duty on this group of items is from 2,000 to, more commonly, 5,000 reis (1*l.*) a kilo, including all glass or other containers. It was interesting to learn, on the other hand, that the total imports of heavier chemicals of British manufacture into Portugal for industrial purposes were by far the larger, while in the case of some substances used in agriculture and viticulture, which are imported duty free, the figures are equally distinctive. Two such examples, also in kilograms, may be quoted.

—	Potassium sulphate.	Copper sulphate.
Great Britain	208,650	6,904,261
Germany	33,180	28,718
France	7	306

As a holiday resort Portugal is still almost an unknown land, rather off the beaten track of the tourist, and consequently possessing an unusual freshness and charm on a first acquaintance. Until four or five years ago the facilities for travel to and in the country were not complete, but now the Booth Line has a new and splendidly equipped service of steamers. This line has the monopoly of the North Brazilian trade between Liverpool and Para, Manaos, and the Amazon River. From this El Dorado the steamers carry rubber to the value of a quarter of a million sterling (at the present rate of 700*l.* a ton), besides several added thousands of pounds value in cocoa, this being the average cargo every ten days alternately to Liverpool and New York. These steamers also carry the mails between Lisbon and the Amazon, so that they touch at the capital city and at Oporto with the punctuality of express trains. For visitors to these Portuguese ports a very complete service (including railways and hotels) has been organised by this company, and it coincides with a recent quickening on the part of Portugal itself to its attractions for sojourners, so that the traveller is relieved of all trouble in a land where, as yet, it is rare to find English spoken. My itinerary was of my own planning, and I had engaged beforehand the services of a courier, who was of distinct service, as in not a single one of the *pharmacias* or *drogarios* which I visited was any language other than Portuguese used, excepting occasionally French. The people are friendly, kind hearted, and always courteous.

Of the supreme beauty of this sunny land itself, of its colour and wonderful fascination, I could not write in too glowing terms; but that is not the purpose of these notes. Nor need I write of the vineyards or the wines, of the lordly ports of the Douro—

"Whose father, grape, grew fat
On Lusitanian summers."

Indeed, the wine trade, and the aspects of it which I had the privilege of seeing, would form an article by themselves.

Oporto.

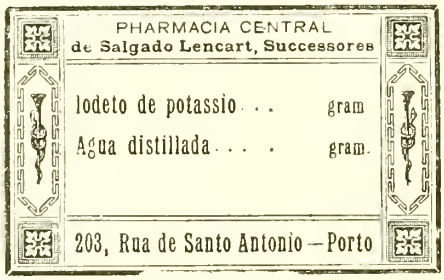
High up on the north bank of the Douro, facing the wine lodges of the Villa Nova de Gaia, across the river, each bearing the names of famous British shippers, is the British Hospital, housed in buildings which up to 1815 were those of a convent. It is well supported by the British mercantile community and by subscriptions from shipping entering the port. Dr. Philip J. A. Seccombe, M.R.C.S., L.R.C.P., a Cambridge graduate in arts and medicine, is physician in charge, and also consults at the hospital, where also British prescriptions have for many years been regularly dispensed and approved proprietary pharmaceutical products supplied. Dr. Seccombe, to whom I am indebted for much courtesy and information, showed me that the amount of an average invoice of drugs from London is practically doubled, owing to duty and freight, by the time the goods



The Pharmacia Central, Oporto.

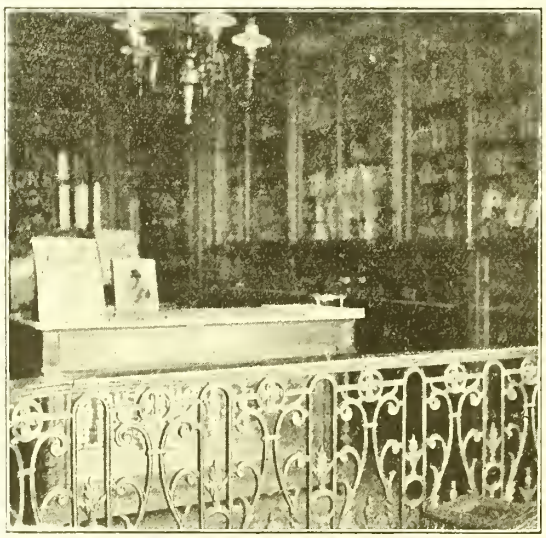
land in Portugal. Mr. W. K. Thompson, a genial Irishman, who has been dispenser to the hospital for many years, was happily convalescing from a severe illness under the shade of the trellised vines on the balcony overlooking

the river. He regrets that British manufacturers do not seem disposed to adopt suggestions as to modifications in packing which would minimise the incidence of the heavy and somewhat clumsily applied duty. At the Pharmacia Central in the Rua de Santo Antonio a considerable number of familiar articles are in regular demand : Pears' Soap ; Eno's Salt (the 2*s.* 6*d.* size costs 4*s.* 6*d.*) ; Bishop's Varalettes and Citrates ; Kutnow's Powder ; Allen & Hanburys' Foods. Elliman's Embrocation appeared to me to be the best-placed British proprietary in Portugal. It was seen everywhere, even in the byways and in the small towns. In good company, more or less, was Keating's Powder, well advertised on the hoardings ; the Fly Cemetery (Tunbridge & Wright) is universal. "Sparklets" are at present being largely advertised in the newspapers, apparently successfully, and the Bouteille Thermos (introduced from Paris) is much to be seen in the best shops. Such novelties as these are irresistible to the well-to-do Portuguese. English perfumery is well represented in Portugal by Atkinson's, Gosnell's, and the Crown Perfumery Co.



Dispensing Label.
Original in claret-coloured ink. Size $2\frac{3}{4} \times 1\frac{3}{4}$ in.

Practically none of the English patent medicines are now advertised, and only one American sarsaparilla. Scott's Emulsion is made in the country, and is one of the very few articles successfully placed on this market. It is right to record that another article of pharmaceutical origin—Lea & Perrin's sauce—is here, as, apparently, everywhere. Mr. Honorius Grant, the British Consul, showed me incidentally an impudent imitation of this product, of local origin, which might easily have been taken for the genuine article with the wrapper done into Portuguese, almost an argument against a too faithful rendering of one's "get-up" into foreign tongues.



A Typical Interior of a Pharmacia.

The proprietor of the Drogaria Rodrigues Irmaos (Brothers), Successores, 153 Rua das Flores, where most of the druggists, many of them wholesale, are to be found (trades in Porto, as it is called locally, are somewhat gregarious), told me that Howards' Quinine is the make generally preferred ; and potassium iodide, also very largely imported, is entirely of Tyrer's or other London make. Burgoyne's is perhaps the best-known English drughouse. Other medicinal chemicals of English manufacture would be much preferred, the quality being, I was told, in some instances better than the German, and the cost of duty is the same ; but shipping by German vessels is more frequent, and the freight is not so high or so uncertain a quantity. Also, the Portuguese never did claim to be specially good at arithmetic, or naturally much inclined to figure out as between lbs. and kilos., or *l. s. d.* into milreis, when considering a quotation. One other type of pharmacy may be mentioned—viz., that of Dr. Moreno in the Largo de S. Domingoes. The physicians do not dispense, but some have a *consultorio* in their pharmacy. This one is typical of the prevailing fashion—two doors and a window between, not, as with us, two windows and a door between. All goods are invariably under glass ; there is no counter, but as a rule a marble-topped table in the centre of the shop proper, just outside which is a balustrade extending over the width of the shop, and long seats for waiting customers, where also the proprietor may very often be seen of a quiet afternoon enjoying the soothing cigarette, which in Portugal is eternal. There are said to be 110 *pharmacias*, some of them carrying amazingly meagre stocks, and forty *drogarios* in this city of 200,000 population, but there is a very large countryside to serve.

Coimbra.

The Pharmacia Nazareth is in keeping with the collegiate atmosphere of this quaint old University city, most gracefully poised on the precipitous banks of the beautiful Mondego River. There are several other pharmacies, but this one has the unmistakable note of distinction which somehow pharmacy at its best gives to a business anywhere. The University dates from 1300, and it embraces all the

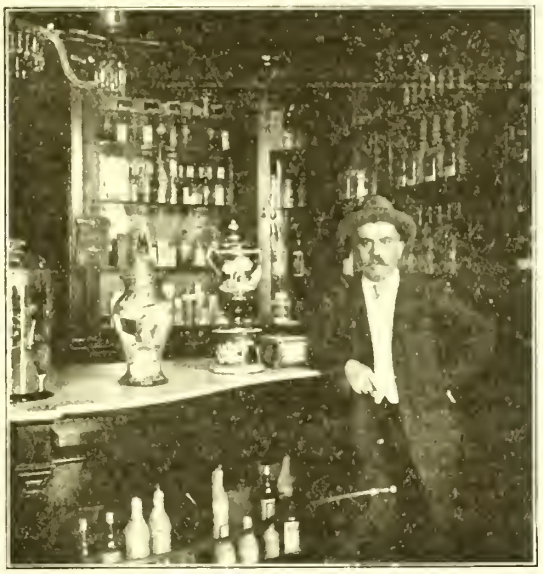


Pharmacia Nazareth.

"faculties." There are 900 students and seventy-five professors ; the former, in their long black academic cloaks, are a constant and striking feature of the narrow streets. There is a School of Pharmacy at Coimbra, as well as at Lisbon and Oporto, attached to the respective Medical Schools. The teaching here is believed to be somewhat in advance of the others. This is the only pharmacy where I saw cameras and photographic goods displayed. Imperial plates and papers were the brand chiefly in stock.

Senhor Nazareth assured me that they would gladly cultivate more intimate business relationship with British houses but for the fact that the latter do not altogether adapt themselves to the business system of the country, and that there is naturally greater facility of communication between

French and German houses. Here, as elsewhere, dispensing practice is largely French, and I may here summarise



SENHOR NAZARETH IN HIS PHARMACIA.

what appear to me to be the reasons for that apparent preference :—

1. The natural tendency on the part of the Latin races to treat with their nearer neighbours.
2. The text-books used by the physicians in the course of their curriculum at Coimbra are for the most part in French. Their studies are very often concluded at Paris, rarely in England.
3. Consequently the Portuguese physicians favour very much French forms of medicaments, and French proprietary medicines are very largely prescribed.

The large Portuguese communities in West Africa and Brazil follow the same practice. Prescriptions are written in Portuguese, occasionally in French, never in Latin; simples are very frequent, *e.g.*, a half-ounce of a tincture to be taken in drops, often in conjunction with several French proprietaries. Lenticules are largely in favour: one French maker visits the country periodically and makes them on the spot, this being found convenient, economical, and avoiding several duties. Very frequently two or more physicians are to be seen at one *consultorio* (having their residences outside the city), and the *casa da saude* (health house) is one that constitutes a more or less complete polyclinic, and, I think, nursing as well. Doctors even of a good class affect rather larger signboards than would be *de rigueur* with us. The prescription is kept, but is given back when the medicine is paid for. Formulæ of all medicinal compounds must be declared on the label: there is a duty of 50 reis (about 3*d.*) on every article of foreign origin, in addition to the duty, already indicated, on imported *medicamentas*. There is an official list of those preparations which are admitted, others may always be specially imported if for actual private use. Prices of medicaments (and dispensing) are officially fixed.



A DOCTOR'S SIGNBOARD.

LISBON.

In this Capital city, rivalled perhaps only by Edinburgh in the precipitousness of its streets and the consequent variety and beauty and comprehensiveness of its vistas, I came into touch with the most highly ethical pharmacy I have yet seen, that of Messrs. Azevedo, Irmao & Veiga, 24 to 32 Rua de S. Roque. Senhor Julio Mendes Barata, the director in chief, was kindness itself in giving information. English prescriptions are not frequent, and there is no English consultant, although Lisbon was formerly so much in vogue as a winter resort with English people. No photograph of the interior could do justice to this pharmacy, which is in three distinct shops, all adjoining. There is a well-equipped laboratory with still and steam pans, and



ONE OF THE THREE ADJOINING SHOPS, RUA DE S. ROQUE, LISBON.

even the usually out-of-sight departments exhibit a tidiness that I could see accurately reflected the strict discipline and precision of the director himself. It is an old business and had outgrown from the pharmacy next door, which is now the director's office, into the present pharmacy proper, which is absolutely innocent of what we would call display—no patents, no proprietaries, even of their own, but, instead, the embodiment of the Pharmacopœia, in tinctures, ointments, pills, and all the rest, in shop-rounds and other containers uniformly labelled, and in glass cases round the walls. The director has newly fitted up for his son, Senhor Julio Pinto Barata, Pharmacien d'Ier Classe, a beautifully appointed private laboratory, occupying the third of the three adjoining premises. This is for chemical and bacteriological work connected with pharmacy and pathology.

In the course of conversation with Senhor Barata I learned that the curriculum at the Ecole de Pharmacie extends over four sessions, at the end of each of which an examination must be taken, which counts towards the ultimate qualification. After two more years of actual pharmaceutical work in the pharmacy, a final State examination qualifies as *pharmaceutico*. The Sociedade Pharmaceutica Lusitana has its own house in the Rua Sociedade Pharmaceutica. The Society's "Jornal" is now in its seventy-fourth year, and is a modest monthly 8vo. of twenty pages. Some other prominent Lisbon *pharmacias* are worth visiting—that of Andrade, in the Rua do Alecrim; Durao, in the Rua de Chiado; and Amaral, in the Rua do Ouro (Gold Street), especially so. There are all styles, and one which I noticed apparently adds the practice of taxidermy.

There has been quite recently inaugurated in Lisbon—I was told by Mr. Philip A. Somers Cocks, H.B.M. Consul, whose extreme courtesy I would desire to acknowledge—a movement to establish a British hospital. It is desired to appoint a British, or British-trained, physician at an annual salary of 750 milreis (150*l.*) who would have the privilege of also carrying on private practice. It is intended also that facilities should be afforded for

the dispensing of British prescriptions at the hospital, because it has been found that such prescriptions are not always readily dispensed in Lisbon, except in one or two of the best pharmacies. It is certain that the neighbouring Mont' Estoril and Cascaes will shortly revive the glories of Lisbon as a winter resort—the Portuguese Riviera, and 300 miles further south than the Mediterranean—and that will be the opportunity for the physician to the British hospital.

The most surprisingly up-to-date thing in Lisbon is the Institute of the Assistencia Nacional aos Tuberculosis, founded by the gifted Queen Amelia, herself an M.D., and opened in 1906. It is thus perhaps the most modern and is said to be the best-equipped in the world. It is of little direct pharmaceutical interest to describe the perfect asepticity of every feature of the buildings and their appointments, or the propaganda designed to enlighten the public on the subject of tuberculosis, all of which the clinical director—Dr. Alfredo Luiz Lopes—explained to me. The pharmacy is a gem, its marble and white tiles, nickel fittings, and plate-glass shelves and benches (even to the aperture through which the medicines are handed) are suggestive of nothing so much as a modern hospital theatre. Merck's are the materials used throughout, every bottle within glass-wall cases. Even the bacteriological department adjoining does not excel the pharmacy. From a most excellent "Formulario dos Medicamentos" I select two items which are not so familiar as most in the very up-to-date collection : it is in Portuguese :

Soluto Iodo-tannico Phosphatado.

Tincture of iodine (Tinctura de iodo-iodetada) (1 in 10)	4
Tannin (scaled from alcohol)	0.80
Syrup of phospho-lactate of lime (1 in 10) ...	40
Glycerin	15
Tincture of orange-peel	1
Distilled water	140

Soluto de Cacodylato de Sodio Iodo-mercurico Esterilisado.

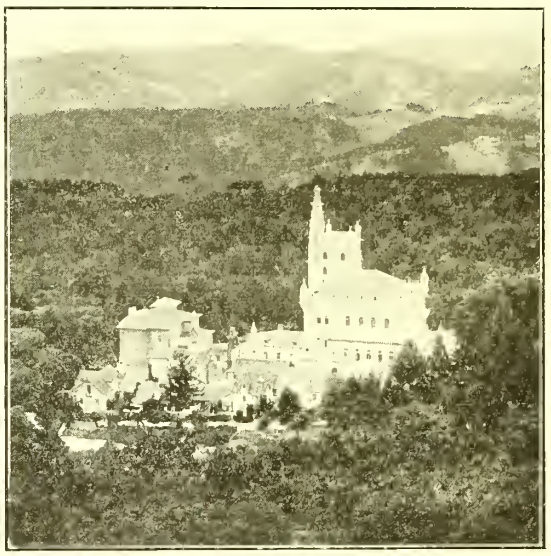
Cacodylate of sodium	6
Iodide of mercury	0.75
Iodide of sodium	0.75
Distilled water q.s. to	150 c.c.

Each c.c. contains 0.04 gram of cacodylate of sodium and 0.005 gram of iodide of mercury.

The former is used in place of cod-liver oil; it will be seen that powerful iodides and mercurials are used largely. Between 500 and 600 out-patients are treated at this institute every day, chiefly by hypodermic and intra-muscular injections. Salt water is administered in 100 c.c. injections for weak chests. It is brought from twenty miles out to sea, at a depth of 10 metres, I suppose to avoid the necessity for sterilisation.

Lisbon has not quite the same native interest as the northern commercial capital. It is strongly Parisian. I saw some artistic mural advertisements done in the local *azulejos*—painted tiles. There is a tax on advertisements, collected by means of an adhesive stamp, as in France. I was interested to learn that Lisbon corks are now cut entirely by machinery; the great forests of the cork oak are in the States south of Lisbon, poor and uninviting territory, I am told, where for hundreds of miles nothing but cork and an occasional olive grove are to be seen, in strange contrast to the luxuriance and variety of the vegetation everywhere else.

The study of pharmacy, interesting as it is in a strange land to every pharmacist, is forgotten in the enjoyment of one charming place hidden away in the heart of poor little Portugal—Bussaco—a monument of gratitude from the Portuguese people to the Duke of Wellington for his deliverance of them on this spot just a hundred years ago. Here, nestling within its own walled demesne, six miles in circumference, is the Palace Hotel. Built for a royal residence, it has been converted to a still more utilitarian purpose through the exigencies of the national finances. It is new and perfect in its wealth of architecture and sculptured decoration—in the extravagantly florid but here surpassingly beautiful Manueline style. It is difficult to write with becoming restraint of the beauty of these woods, after fifteen centuries of cultivation by the monks, whose Orders now know them no more; of the avenues of cedar and pine and eucalyptus; of the walks richly canopied with foliage of tropical luxuriance, and of the wealth of exotics from India and other lands where the Portuguese were the first colonisers. The seven miles mule-drive from either of the nearest stations is through forests of pine and clumps of heather, in one steady climb until the hotel itself is reached, 2,000 ft. above sea level. Here, at an



Palace Hotel, Bussaco.

altitude at which it is never unduly hot, may be seen Coimbra, fifteen miles away and beyond that the blue waters of the Atlantic. I came to this veritable paradise of Nature to have the last of one's preconceived notions of the country entirely altered, and Bussaco burst upon me like a revelation. How few are there in our tight little islands, which are the target of cyclonic weather, the lands of mists and rains, who know that such a beauty spot, where it is always summer, is within four days' journey from London.



Lists.

Messrs. Francis Newbery & Sons, Ltd., 27 and 28 Charterhouse Square, London, E.C., send us an advance copy of the proprietary goods section of their catalogue for 1909. It extends to 434 pages, and embraces druggists' sundries, packed goods for chemists, and mineral-waters, as well as stamped medicines and medicated wines. The firm state that, in revising the catalogue, they removed from the Proprietary Goods Section 477 entries, added 230 new entries, and modified 836 quotations, the last being largely due to increase in spirit-duty. The Druggists' Sundries Section is considerably extended, and numerous illustrations have been added. Any chemist can obtain a copy of the catalogue by applying to the firm for it. We received from the firm the other day a letter with reference to the day we celebrate, which we venture to quote :

It gives us exceptional pleasure to congratulate you on your Jubilee. We were, as you probably know, advertisers in your first issue in September 1859, and we have watched with pleasure the journal's advancement, both in its usefulness and popularity as the years have gone by. It was a few years after our centenary in 1846 that your journal was brought out, and in 1858 the present managing directors of our firm joined

in partnership. Many changes have taken place in the druggists' sundries trade since then. We have made several moves consequent on increase of trade, and from time to time these changes have been chronicled in your journal. Perhaps your articles on our 150th and 160th anniversaries have been to some of more than passing interest. Talking of the changes affected since the starting of your journal, we might mention the dying out of the old style of business when chemists used to make and compound nearly all their tinctures, charge high prices, and give long credit. Now all is reversed. Chemists have their drugs packed and labelled for them (a department for which we have had in existence for years past), and do a fair amount of ready-cash trade. Desperate cutting has of late years been checked by the Anti-Cutting Association. It is felt more than ever to meet the growing competition that the busy chemist must know with as little trouble to himself where his customers' requirements can be obtained, and in this THE CHEMIST AND DRUGGIST materially helps to keep the annual catalogue up to date. We have endeavoured, and, if the world-wide demand counts for anything, succeeded, up to the point in making our catalogue a really useful chemists' hand-book, not only of the goods sold, but as to poisons, stamp-duty, wine-licences, etc., etc. We might add that the addition of photographic sundries has of late years become a well-known feature in the up-to-date chemist's shop, and we have catered for it by printing a special catalogue with loose discount-sheet.

Messrs. Parnall & Sons, Ltd., Narrow Wine Street, Bristol, have published an illustrated catalogue of artistic shopfittings for chemists and druggists. It comprises exteriors and interiors, among the shops illustrated being the premises of Messrs. Timmis & Richards, Chelsea; Lester & Son, Nuneaton; Timothy White Co., Ltd., Folkestone; Mr. F. Moss, Bristol (exterior and interior); Mr. W. Edes Everett, Colchester; T. E. Butler, Sons & Co., Leicester (interior); and Parke's Drug Stores, Finchley Road, London, N.W. (exterior and interior). The examples illustrate quite varied styles of shop architecture of the capabilities of this firm in that regard. Copies of the catalogue may be obtained on application to the firm.

CHEMISTS' EMULSION.

Messrs. Woolleys, Ltd., of Blackburn, manufacturers of cod-liver-oil emulsion, which is specially reserved for chemists' trade, send us samples of some new cartons which they have added to that already extensive series. They are all printed in colours and gold, and in each case there is a space left for the retailer's name and address. One carton has the lettering embossed, another a codfish as the central picture, a third a fisherman holding out a giant cod, and the fourth depicts the "Twin Fish" brand.

PACKED GOODS.

We refer in the Supplement Section to the illustrated list inserted in our Colonial and Foreign Edition by Messrs. C. J. Hewlett & Son, Ltd., Charlotte Street, London, E.C. The firm have also sent us a number of the cartons and specialities, in order that we may judge of the faithfulness of the reproductions on their inset. There is no question that these are the originals in miniature. There is on each a space for the chemist's name and address. The firm also send us a specimen of the new Freckle Cream for the complexion, which appears to be a good combination for the purpose, and it is daintily put up. Their Petroleum Brilliantine is also an excellent toilet-preparation—a little of it going a long way—and the value is good.

DIAMALT AND COD-LIVER OIL.

The British Diamalt Company, of Sawbridgeworth, Herts, and 11 and 13 Southwark Street, London, S.E., have, after a long series of experiments, produced two distinct combinations of Diamalt Malt Extract with Cod-liver Oil. The peculiarity of this combination is that the flavour is solely due to the Diamalt, no essential oil or other flavouring ingredient being added, because the makers are of opinion that such flavourings upset the stomach. The Diamalt used for these preparations is specially prepared so as to bring out the full flavour of the fine barley malt from which it is made. The cod-liver oil strengths are 15 per cent. by weight or 20.3 by measure, and 33.3 by weight and 41.7 by measure. They are perfect blends of oil and extract, and yet can be easily poured from the bottle, and Mr. E. F. Harrison, B.Sc., who is recognised as an authority on this subject, has proved that the diastasic value of the combination is as high, proportionately, as that of Diamalt itself, which he has reported to be the most diastasic extract on the market. The Company will supply the new preparations in bulk or put up in bottles ready for retail.

THIS SEASON'S OTTO.

The otto of roses placed on the market this year by Messrs. Shipkoff & Co., Kazanlik, Bulgaria, is of exceptionally fine quality. Mr. E. J. Parry, B.Sc., F.I.C., has furnished us with the following analytical data respecting it:

Specific gravity at 30	0·8570
Optical rotation	-2° 30'
Refractive Index at 25°	1·4635
,, ,, ,, (after washing with water)	1·4642
Melting point	22°
Total alcohols as geraniol	70·25
Alcohol	Absent.

These figures show that the otto is pure. Nowadays the art of sophistication has been carried to the extreme of ingenuity, chemical knowledge of essential oils having so much advanced that sophisticators can obtain synthetic bodies approximating in composition to those of the natural products, and analysts find it difficult to detect such sophistication. Messrs. Shipkoff & Co. give their personal guarantee with their otto, and are willing at all times that it should be submitted to the most critical analysis.

A NEW SANTALOL ETHER.

Thyresol, the methyl ether of santalol, has just been placed on the market by the Bayer Co., Ltd., 19 St. Dunstan's Hill, London, E.C. Thyresol is used in the internal treatment of gonorrhœa, cystitis, and urethritis, and is a colourless liquid with a faint aromatic smell suggestive of sandalwood oil. It is stated that thyresol does not "repeat" like sandalwood oil and santalol, this being explained by the fact that santalol is not split off in the system from the methyl-ether. Messrs. Bayer put up thyresol in capsule and tablet forms (retailing at 2*s.* and 2*s.* 3*d.* the box), and also supply it as a liquid (retailing at 2*s.*). The tablets have a base of magnesium carbonate, and hence have in addition laxative properties which are advantageous in the treatment of gonorrhœa.

SHOW-CARDS AND POSTERS.

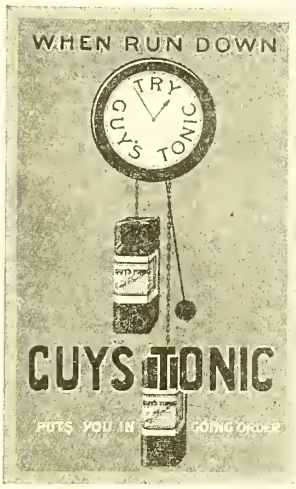
This magnificent poster, measuring about 6 ft. deep and 4 ft. wide, should give Mason's Extract of Herbs a decided fillip. The lithography is as good as the drawing, and the sparkling eye of the farmer follows the looker-on at any angle. The border of the poster is vermilion, and the other predominating colour is the blue of the farmer's smock. We understand that the poster is to be liberally used throughout the country, and there are many amongst our readers to whom it means better business. Any chemist who can place one of these posters should ask Messrs. Newball & Mason, of Nottingham, for one.





Messrs. Goodall, Backhouse & Co., of Leeds, the originators and manufacturers of Yorkshire Relish, have in their time published many attractive show-cards, but we question if they have had anything more attractive and better executed than the card of which we give an illustration here. The original measures 19½ inches deep and 10 inches wide. The huntsman wears a familiar scarlet riding-coat, and the bottle of Relish he holds in his hand is an exact facsimile of the size of the original. Copies of the card may be obtained on application to the firm at the above address.

Guy's Tonic Co., 12 Buckingham Palace Road, London, S.W., have produced a small showcard, measuring 10 in. by 6 in., to stand on the counter or showcase. It is emblematic in so far as the weights to the clock are intended to show that Guy's Tonic is the thing to use "when run down." The background of the card is green, the prominent lettering crimson, and the "weights" are exact facsimiles (reduced) of the Guy's tonic package. In reproducing in monochrome a colour scheme such as this certain elements of the design are in a measure lost, but on the whole our engraving shows what the card is. Copies will be sent to any chemist on application.



Bulgarian Rose Distilling.

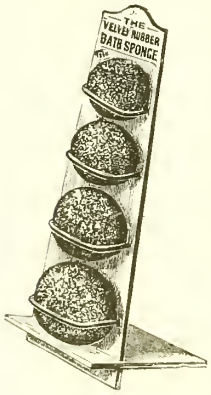
We are indebted to Messrs. Bontcheff & Kidoff, Kazanlik, Bulgaria, for a fine photograph, from which the following engraving has been made.



The photograph illustrates the manner in which roses are brought in from the gardens and distilled in alembics. Mr. Frederick Boehm, 16 Jewry Street, London, E.C., is the agent for Messrs. Bontcheff & Kidoff's otto of rose.

A New Rubber Sponge Stand.

In order to give effective counter or window display to the latest and most convenient shape of the "Velvey" indiarubber bath-sponges, which are known as "rounds," Mr. H. A. Wanklyn, of 17 Manchester Avenue, Aldersgate Street, London, E.C., has just introduced a new show-stand, shown in the annexed illustration. This stand, which is made of white enamelled wood, is admirably adapted for displaying the four different sizes of the sponges (A to D), is 30 in. high, and can be packed flat for export, the wire supports by which the sponges are secured tilting up for this purpose. The stand is supplied free with the first order for a dozen sponges. Judging by the sheaf of orders we were shown, this latest form of sponge is already having a large sale, it being a remarkable approach to the natural product in shape, while its soft texture and fineness of "grain" will be readily apparent even to delicate skins. The smallest size retails at 4*s.* 6*d.*, and the wholesale prices leave a substantial profit.



B.M.A. Exhibition.

(By the "C. & D." Correspondent.)

Belfast has this week been *en fête*, and it goes without saying that the hospitality for which Ireland is proverbial has been showered without stint on the thousand visitors, more or less, that have made the great linen capital their temporary home. To begin with, the weather has been good—for Belfast.

A walk round the Exhibition Hall on Tuesday found the exhibitors all in excellent spirits. The forenoon had been especially crowded, which was something unusual for a first day. This was probably accounted for by the fact that no service was held, the Belfast committee having, with wise prevision, got all the preachments over on the preceding Sunday. Whatever the reason, there is no doubt that for a first day Tuesday was a brilliant success, one firm reporting interviews with no fewer than 120 medical men. It was anticipated that Wednesday and Thursday would be even more largely attended, and, if that anticipation has been realised, there must have been very good business done by the exhibitors.

The local arrangements were well planned and excellently well carried out. The Exhibition Hall is situated directly at the rear of the University, where all the sections met, and thus it was easily accessible to the members. Large and well-lighted and ventilated, it opened on to the large conservatory of the Botanic Garden, and here a very good orchestra discoursed music for the greater part of the day. There were in all ninety-two stands, and these represented all the leading drug firms, though not a few instrument firms were absent this year.

Taking a walk round, I was struck at the entrance by a very fine exhibit by Burroughs Wellcome & Co., who have once more taken space in the Exhibition. This exhibit was housed in two large cases, and embraced all the firm's leading lines, the newer remedies, such as Soamin, Ernutin, etc., having prominence, with a good display of the Wellcome chloroform and fine chemicals and the various sera and vaccines produced by the firm. B. W. & Co.'s great rivals—Parke, Davis & Co.—were at the opposite end of the hall, and there, too, the representatives were kept constantly at work. One feature of the P., D. & Co. exhibit was a series of cultures showing the actual process followed in the preparation of vaccines, and a new feature was the fact that the digitalis group of remedies were for the first time labelled with the standards actually employed by the firm, these standards being stated in "heart-tonic units." A small dark room was in use here, where some very beautiful monochrome lantern-views were shown of P., D. & Co.'s 300-acre biological farm. Reynolds & Branson, of Leeds, and James Woolley, Sons & Co., Manchester, were well to the front, the latter with a stand showing pharmaceutical preparations, and the other where only apparatus was displayed. One feature took our fancy—namely, the Boval adjustable truss, which we were informed was being sold by the thousand. Close to Woolley's was the stand of Oppenheimer, Sons & Co., and here were shown a full list of the various specialities for which the firm is famous. Armour & Co. had confined themselves to an unusually small space, but once they were located they were found to have a useful show of organic preparations, digestive ferments, beef-juice, etc. The Bayer Co. has a nice display of synthetic products, and among other new introductions our attention was specially directed to Autan, a compound of paraformaldehyde with a peroxide, which when mixed with water gives off formaldehyde and steam. The Hoffmann-La Roche Co. had a magnificent display of pure alkaloids and their salts, and we were informed by their representative that they are in a position to compete, both as regards price and quality, with any British firm. The crystals on exhibition were of exceptional size and apparent purity. Among the exhibitors of food-products we may mention Savory & Moore, Mellin, Callard & Co., Horlick, while Bovril, Liebig, Maltine, Miol, and other manufacturing firms of this class were well represented. One of the most interesting among the exhibits of apparatus was the clinical temperature-recorder shown by Siemens Bros. & Co. This makes a record of the exact temperature for a whole week, if necessary the actual changes being automatically transferred to paper by the instrument. Mr. Zeal showed some new modifications of his excellent thermometers, and Frank A. Rogers had a nice display of sprays and inhalants. Fairchild Bros. & Foster; Wyleys, of Coventry; Grattan & Co., of Belfast; Kirby & Co.; Wander; the Anglo-American Pharmaceutical Co.; the Angier Chemical Co.; and a number of bottles of artificial and natural mineral waters were in evidence.

Our Town Traveller.

BUSINESS is better. This is almost all that we can say in the way of introduction, for our peripatetic ambassador has made such notes of his visits that they must serve with little introduction.

"Cherry Blossom's" New Home.

Passing along Blackfriars Road I was struck with the handsome new building which Messrs. John Gosnell & Co., Ltd., the well-known perfumers, have erected to replace the comparatively new structure which was destroyed by fire in March last year. The new premises occupy a prominent corner at the junction of Charles Street with Blackfriars Road, with street frontages 150 feet in length, and possess almost twice the floor area of the previous



building. There are six storeys separated by steel and concrete floors, and two separate staircases having concrete steps and landings, enclosed throughout by brick walls, with the view of insuring the safety of the workpeople. The main roof is flat throughout, covered with Seyssel asphalt on concrete bed, while the two street fronts are faced with "Carrara," manufactured and erected by Messrs. Doulton & Co., the two lower piers being in two shades of green, and the upper portions from floor arches to summit in the white material. Electricity is provided for lighting, and motive power for the machinery and elevators. The heating is by hot-water radiators. Altogether the building is admirably planned, and with the increased facilities now available uninterrupted progress is looked for. Our illustration is from the "Building News."

Carlton Works.

It is fitting that the new premises for a business which is in its Jubilee year should be described in this issue. I refer to Messrs. Jules Denoual & Co., Carlton Works, Asylum Road, London, S.E. Under the guidance of Mr. T. Desnos, the proprietor, I had the opportunity of inspecting all departments. In 1897 the business was taken over by Mr. Desnos. It was carried on then at 4 New Cross Road, where Mr. Denoual started making capsules in 1859. Shortly after Mr. Desnos acquired the "works" (a small place at the bottom of a garden), the house itself had to be requisitioned to cope with the increasing volume of trade; next a sawmill in Wagner Street was converted into a pharmaceutical manufactory, and subsequently the adjoining building was also added. Finally, Mr. Desnos acquired in 1908 the fine four-storey building (each floor averaging over 4,000 square feet) shown in our illustration, and the freehold in front allows plenty of room for expansion. Asylum Road is entered off Old Kent Road, and the factory is not many yards away from that busy thoroughfare. The offices are on the right as one enters, and occupy the full width of the building. Still further to the right is the perfumery department. The firm are the sole agents for Claude Raynaud & Cie.'s Grasse perfumes, and the numerous original packages and cases in the department show that the agency is an important one. The cheaper lines, many of which have been added recently, were being put up during my visit. Concrete essences occupy a smaller adjoining room. The pastille department to the extreme left is the only one still incomplete, but machinery capable of making two tons per day will shortly be in position. A pump close by draws water from the firm's own well. The motive force throughout the building is derived from a gas engine. The boiler-house, coach-

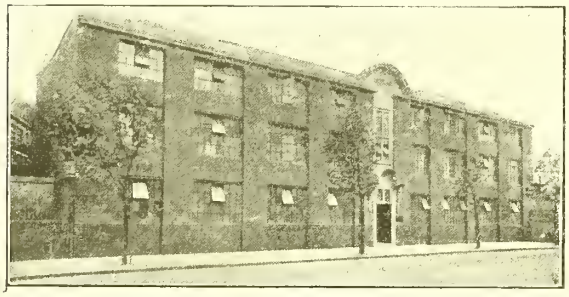


house, and stables are outbuildings joined up to the main building. The basement is used chiefly for the storage of bottles. A choice of ways is offered of reaching the first floor, either a fireproof stone stair or an outside iron staircase at respective ends, or a spiral staircase in the centre, but the lift is only used for carrying goods. This floor is the stock-room and despatch department. It is divided into sections by rows of shelves. Capsules, tablets, eucalyptus oil, lozenges, pastilles, printing department (with three printing-presses) indicate roughly the various divisions in which boxing and bottling of supplies are done. Stock tins holding about 10,000 capsules or tablets are numerous, with an infinite variety in size and colour of the contents. A workshop for the making of packing-cases is situated at the end of the floor. Ascending higher, the capsule-making department is reached. The machine-driven apparatus is in duplicate, while, should the engine fail, a hand-worked capsule-press is available. The powerful hydraulic presses turn out capsules with astonishing rapidity. There is still a good demand for hand-made capsules, and they also are filled and finished at a surprising pace. Suppositories, bougies, and flat glyco-gelatin lozenges are made in the hand-capsuling room. Hot-air drying-rooms are quite numerous on the two top floors. In the tablet-room four machines were at work, while a fifth was ready for putting in position. The sugar-coating of cascara sagrada tablets was also in full swing. The carpenters' shop and the hand-making of pastilles are also on this level. The top floor is practically given over to the lozenge making. I found a powerful mixing machine incorporating ingredients of Brompton Throat Hospital lozenges, and a lozenge-cutting machine punching the mass into discs. A stock of these was being made in preparation for the coming winter, and many barrels, containing 5 cwt. each, are already in store. Linseed, liquorice, and chlorodyne lozenges are another favourite, judging from the size and number of the casks of them that I saw. A second mixer was preparing the cascara sagrada extract for the tablet-room. Formalin throat-tablets are sufficiently important to have a machine and a section of this floor to themselves. Girls were also busy stamping out cachous, while chocolate worm-cakes were the last product seen before having a splendid survey of London from the flat roof. Although the quiet season is now on, I saw plenty of indications of a prosperous business. The Tasmanian eucalyptus oil agency is one of the busy sections, while great things are expected from Freiderich dentifrices, both of which are

sole agencies. The fitting of the entire establishment shows the influence of the personal factor in getting the best out of its structural adaptabilities.

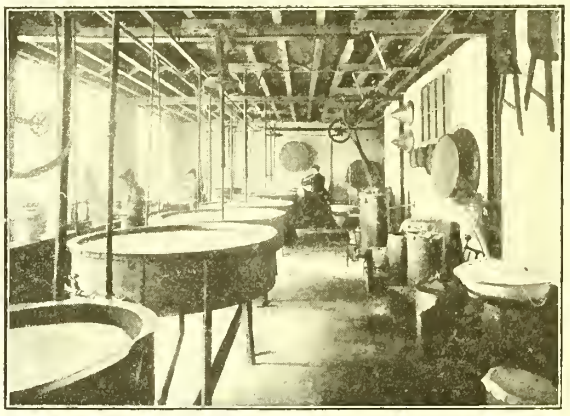
Shen Works.

The manufacturing and wholesale business of Mr. Robert Blackie has now been transferred to the new building which he has erected on a site in Tower Bridge Road, London, S.E., that he has taken from the London County Council on a ninety-nine years' lease. When Mr. Blackie branched out into the wholesale business six years ago he obtained premises in Tooley Street for manufacturing and others in Tower Bridge Road for packing. Both departments are now concentrated in the new building. It is interesting to note that Mr. Blackie commenced manufacturing in order to feed several retail shops which he had opened on the south side of London. He had no idea then of supplying the trade. His first line was the compounding and packing of powder dentifrices, which was followed by face powders and later by ointments. These are still his three leading lines. First one "brother chip," then another asked him to supply them, and so he ventured through the *C. & D.* to seek a wider *clientele*. He has got it. Mr. Blackie served his apprenticeship with the late Mr. Sangster, of Dufftown, and afterwards he had considerable English provincial experience—for example, with Messrs. Briggs & Gamble, of Grantham. He was also three years in the warehouses of a leading London wholesale house, and managed a perfume business in Hitchin for some years before he purchased an old-established pharmacy in Bermondsey, which he developed rapidly on modern lines, and added four or five others to it.



Shen Works.

Shen Works are a handsome red-brick building of three floors, with a frontage to Tower Bridge Road and backing on to Sun Street, where goods are received and sent out. On entering from Tower Bridge Road one finds the general office on the right, at the side of which is Mr. Blackie's private office, where there are showcases containing a sample of each of the products made in the factory. Behind these offices are the general packing department and the stores for tooth-powder bases, the extent of the latter part of the business being shown by the fact that six tons were in stock when I made my tour of inspection. In the despatch packing department a lift goes to the upper floors and thus connects all the six departments into which the business organisation is divided. To the left of the entrance are a neat private laboratory and the main manufacturing laboratory, which is here illustrated. The large steam pans are of an unusual type, which I have not seen in any other pharmaceutical laboratory, in fact, the apparatus and fittings are remarkably original in design, and have an individual touch about them which reflects Mr. Blackie's mechanical ingenuity. The circular pans are shallow, 4 ft. in diameter, with straight sides, jacketed and aluminium lined. They have both steam and cold water supplies, so that the temperature can be regulated to any desired point. They are chiefly used for the manufacture of ointments in conjunction with a high-pressure steam copper pan for melting paraffin-wax and other hard constituents of the ointment-bases. In preparing these every detail to ensure perfect admixture appears to have been thought of, so that the ointments produced are uniform, but after they become solid they are "spun" in a quite original manner. A sample of boric ointment was "spun" for me. It came out of the aluminium pan with that "short" granular appearance common to finished products of this character, but after it



The Main Laboratory.

was "spun" it was smooth and creamy. The apparatus is worked by an electric motor, which indeed supplies power throughout the building. The laboratory is also equipped with emulsifiers, stills, and other apparatus.

Behind the laboratory is the department in which tooth-powders are compounded, one for making granular and other effervescing preparations, and a third which is solely devoted to the production of face powders. The greater part of the first floor is devoted to "wets" and "drys," the former being on the Tower Bridge Road side. The department is arranged in bays—a system which enables a great variety of stock to be put in a minimum of space. The fixed oils department is on the north side of the floor. I noticed in the office that three copies of each order received are typed. One of these serves as an invoice and the second and third for the departments to carry out the order on the respective floors. All the items of each order are collated on the first floor and checked before being sent down by lift to the packing department. The south side of the floor is devoted to dry packing. I noticed a Canadian order for seidlitz powders, fullers' earth, and toilet oatmeal being packed. A room at this end of the building is devoted solely to the manufacture of Java-powder paper by a process devised by Mr. Blackie, which is ingenious yet extremely simple. It is not necessary to go into further detail regarding my visit of inspection. Mr. Blackie modestly says that he is only a beginner, but matured ideas are represented in the equipment of his factory, and he has left himself room to grow, for he may add a few more floors to the building "when the time comes." The showcases in his office reveal a great variety of pharmaceutical and toilet products, and it is not surprising that with tooth-powders as his first leader he has some novel and unique containers for them. The latest is a series of plaid boxes with name on a pure white enamel ground. These take well in the Colonies as well as at home. Mr. Blackie's price-list contains illustrations of them, and I would advise those interested to ask for a copy of it.

The Enterprising Chemist.—Clara Butt tells that on one occasion she and her husband (Mr. Kennerley Rumford) were motoring through the Midlands when her throat became sore and the heat made her head ache. They stopped at a chemist's in the next town to get something for the headache. The chemist put up a draught and brought it to the door, and, recognising who his customer was, went back into the shop and came out with a bottle of throat tonic in its place, asking her very respectfully whether, before she took the phenacetin, she would mind taking a dose of his throat tonic, which, he said, was a special preparation of his own, in order that he might be able to say in his advertisements that she had taken it. Not meeting with any success, he returned to the shop and brought her the headache draught. When motoring through the same place a few weeks later, Mr. and Mrs. Rumford were surprised to see huge placards outside the chemist's shop, and all over the town: "Try So-and-so's throat tonic. Patronised by Madame Clara Butt." Mr. Rumford sent to know what the chemist meant by it, and was told that he had poured some of his throat tonic into the headache draught! The bills were soon taken down.

BRITISH PHARMACEUTICAL CONFERENCE

Forty-sixth Annual Meeting.





NEWCASTLE-ON-TYNE JULY 26-29, 1909

THE inaugural meeting of the British Pharmaceutical Conference, held at Newcastle on September 2, 1863, was presided over by Mr. Henry Deane, F.L.S., of Clapham, who was selected the first President. He was a typical pharmacist of the old school, a gifted botanist, and was revered in his day and generation. At the Newcastle meeting in 1889 the President, Mr. Charles Umney, was one of the new school of pharmacists which the educational work of the Pharmaceutical Society had created. Mr. Umney was the Bell Scholar in 1862 (Tilden and Tolbert were the first of this class—1861), and he was typical of a devolution in pharmacy—viz., the wholesale manufacture of galenicals; a change due in the first instance to the greater demands upon the retailer by the public for counter-service, thus robbing him of time devoted to manufacturing—a circumstance accentuated later by increased intricacy of pharmacopœial processes. Thus retail pharmacists who had specialised were drawn into the wholesale trade, and Mr. Umney was one of the first of this new race. Another type of man has occupied the presidential chair at Newcastle this week—what Aberdonians call a "country droggist" and "a lad o' pairts"—Mr. James Fowler Tocher, whose distinctions outside pharmacy place him in that small group of the Conference Presidents of whom Henry B. Brady and G. Claridge Druce are typical. Mr. Tocher was born in the parish of Fyvie on October 24, 1864, and at the age of sixteen entered upon a four-years' apprenticeship with Mr. William Troup, chemist, Rhynie. After that he went to Glasgow as an assistant for a short time, then north again to Aberdeen, and, having passed the University Preliminary examination in 1884, entered the service of Dr. Robertson, who kept a pharmacy in Castle Street, Aberdeen. In the 1885-86 session he studied chemistry at Marischal College and passed the Minor examination on April 29, 1886. In October of the same year he commenced business as a "droggist" at 1 Chapel Street, Peterhead. Two years later he did a rather unusual thing by coming south to Mason College, Birmingham, during the sessions 1888-89, in order to study under Professor Tilden for the Associateship of the Institute of Chemistry. He passed the Final examination for this in July 1889, and exactly a year later passed the Major examination. Then he began research work, and in 1891 devised the B.P. test for detecting sesame oil in olive oil, following this up with a thorough investigation of the constituents of sesame oil and correlative subjects—work which extended over three years. Since then he has published numerous papers which reflect his abilities as an analyst and a pharmacist. He was in the meantime acting as Secretary to the Buchan Field Club, and, besides his business of a pharmacist, had acquired a reputation as an analytical and consulting chemist. The Club referred to brought him into contact with a group of men such as every pharmacist has not the opportunity of associating with, the members being students of Nature and including University professors, medical men, lawyers, bankers, and other professional men or men of academic attainments. His share in building up the reputation of this Club was recognised last year, when its majority was celebrated, and the members presented him with a testimonial in the shape of a Remington typing-machine, Mrs. Tocher receiving some jewels. Another local club of *littérateurs* and scientists meets in Mr. Tocher's laboratory every Saturday evening, where they have veritable *Noctes ambrosianæ* such as Christopher North immortalised. Amid these surroundings, and stimulated by love of mathematics, Mr. Tocher in 1895 commenced anthropological observations which have resulted in the publication of a number of monographs, the most important being "The Anthropometric Characteristics of the Inmates of Asylums in Scotland" and "The Pigmentation Survey of School-children in Scotland." The latter was done under the *ægis* of the British Association, Sir William Turner being Chairman of a committee that was formed to carry out Mr. Tocher's scheme. The work was begun in 1902 and was completed with the publication of the report by Mr. Tocher at the end of last year, when "Nature" said of it: "For completeness of detail and thoroughness of statistical investigation, the present memoir is unequalled." In the meantime Mr. Tocher had been attending to his business and analytical practice; had been doing his duties as a member of the Pharmaceutical Board of Examiners for Scotland: found time every year to be present at the meetings of the Conference and of the British Association: once or twice a year he would come up to University College, London, for a short period of study under Professor Karl Pearson, the authority on biometry, eugenics, and statistical



THE PRESIDENT OF 1908-9,
James Fowler Tocher,
Pharmaceutical Chemist,
B.Sc., F.I.C., F.C.S., F.R.A.I., etc.

science; and also in the period he gave to pharmacists two of the most notable contributions of the past decade—his Pharmaceutical Council territorial representation scheme and his scheme for a University degree for pharmacists. But the most astounding circumstance connected with this remarkable man's life since the century began was his daily journeys from Peterhead to Aberdeen and back throughout the summer and winter University sessions for four years in order that he might attend the classes necessary to obtain the B.Sc. degree. This involved several hours' journey daily, and in the latter part of the curriculum Mr. Tocher's son was a fellow-student (of medicine). When Tocher *pere* walked up the Mitchell Hall of Marischal College last year to be capped, the friends of Tocher *fils* sang a verse of that well-known hymn which tells that "childhood's years are passing o'er us." Men occasionally arise who, with large brains and long purses, with unlimited assistance and great influence, make such a mark in science as Mr. Tocher is doing, but in his case the long purse is absent, and assistance and influence have had to be created by himself. We do not profess to understand how one so placed has made such a record, and it must be remembered that we have not by any means exhausted the tale of Mr. Tocher's accomplishments, nor have we touched upon his personal magnetism, the charm of his conversation, the catholicity of his knowledge of literature, or the extent of his scientific attainments. Withal he is not ashamed of the fact that he is a "country druggist." It will be agreed that he is a worthy successor of the long line of British pharmacists who have followed Henry Deane as Presidents of the British Pharmaceutical Conference, and that he has distinctions which mark him out as a man apart.

The Reception.

Following the precedent of many previous Conferences, the first official meeting was a reception on Monday evening. This took place in the handsome buildings of the Armstrong College, Barras Bridge, which are the head quarters of the Conference. The new wing of this College is particularly striking to those who see it for the first time. The idea of dignity and solidity is instinctively conveyed, and the handsome fittings of the interior carry the same feelings of satisfaction to the beholder

Shortly after eight the company began to assemble. The President of the Conference with Mrs. Tocher, Mr. and Mrs. C. Weddell (Chairmen of the Local Committees), the Lord Mayor of Newcastle (Alderman J. J. Forster), and Professor Lebour (Vice-Principal of the College) were ranged just inside the King's Hall ready to shake hands with the visitors. Mr. T. Maltby Clague (Hon. Secretary of the Local Executive) and his two sons were at the entrance to the hall, and Mr. Clague called out the names of the arrivals as they passed within the purview of the President's party. Academic robes were much in evidence, and it is interesting to note that not only were robes worn by the professorial staff of the College, but many pharmacists in this way were able to show that a University had conferred on them a degree in science or arts. A full list of the visitors need not be given, as this may be taken to coincide with the attendance-book list which is given elsewhere, but the following are some of those whom we noticed:

Mr. F. W. Ashton (Croydon), Mr. and Mrs. I. Bourdas (London), Mr. and Mrs. F. W. Branson (Leeds), Mr. Richard Bremridge (London), Mr. Clayton (Oxford), Mr. John Cleworth (Manchester), Mr. W. B. Cowie (Edinburgh), Dr. Coull (Edinburgh), Mr. W. L. Currie (Glasgow) and the Misses Currie, Mr. J. Dolbear (Oxford), Mr. W. Duncan (Edinburgh), Mr. and Mrs. H. Finnemore (London), Mr. Franklin (Manchester), Mr. W. Giles (Aberdeen), Mr. Hanson (Bradford), Mr. J. Rutherford Hill (Edinburgh), Mr. D. Lloyd Howard (London), Mr. W. L. Howie (London), Mr. Griffiths Hughes (Manchester), Mr. and Mrs. Jennings (London), Mr. W. Johnstone (Manchester), Mr. Kay (Aberdeen), Mr. Layman, sen. (London), Mr. C. E. Layne (Newcastle), Mr. Harry C. MacEwan (Newcastle), Mr. N. H. Martin (Newcastle) and Miss Martin, Dr. W. H. Martindale (London), Mr. and Mrs. G. Merson (Kilmarnock), Mr. W. A. H. Naylor, Mr. I. W. Nichol (Belfast), Mr. and Mrs. E. Saville Peck (Cambridge), Mr. and Mrs. J. C. Pentney (London), Mr. E. W. Pollard (Ryde), Mr. Pruen (Newcastle), Mr. and Mrs. F. Ransom (Hitchin), Mr. F. Pilkington Sargeant (Leeds), Mr. Silson (Bradford), Mr. and Mrs. J. Smith (Dublin), Dr. Chas. Symes (Liverpool), Mr. Thos. Tyrer (London), Mr. and Mrs. W. F. Wells (Dublin), Mr. and Mrs. Edmund White (London), and Mr. Wilson (Haddington).

When the arrivals began to slacken down, the Reception Committee made a move towards a dais at the end of the hall, and the Lord Mayor—a striking figure in his scarlet robes and chain of office—welcomed the Conference to the city. He said that he could not promise continual sunshine, but his welcome was none the less cordial. He referred to the fact that he had that afternoon received the delegates from the Turkish Parliament, and, after deploring the absence of sunshine, he was met with the reply, "Never mind the sunshine: it is your practical sympathy and help we want in framing the laws and future of Turkey." The Lord Mayor then went on to speak of the inauguration of the Conference at Newcastle in 1863, when his predecessor in the mayoral chair—Sir Isaac Lowthian Bell—was present. He also recalled the names of the celebrated trio of Novocastrian pharmacists whose names are household words in the craft—Brady, Swan, and Mawson—and whose example of duty the present Conference members should endeavour to follow. The work that they did forty-six years ago was of great importance, and it hardly needed any encouragement to the present generation to keep up the old ideals and noble work which make for the purity of medicines and alleviation of the sick. If those who are ill are supplied with pure drugs they have a better chance of recovery. Then, after a reference to the features of Newcastle, its buildings and industries, the Lord Mayor concluded: "On behalf of the city I give you a hearty welcome."

The Vice-Principal (Professor Lebour) next welcomed the Conference on behalf of the College authorities, and spoke of the scientific aims of the Conference, which made the duty a particularly pleasing one to him.

The President (Mr. J. F. Tocher) thanked the previous speakers for their kind welcome, and, after referring to the convenient geographical position of Newcastle as headquarters of the Conference, alluded to the *C. & D.* guide to the all-day excursion, where the Scots are spoken of as "unconquerable." The fact that the Scots have penetrated south beyond the Roman Wall is due to the fact that they are anxious to spread the light of civilisation. (Laughter.)

Mr. G. Weddell then called attention to the exhibition and demonstrations in the laboratories, and the Lord Mayor thanked Mr. Tocher for his speech. "We at Newcastle," he added amidst laughter, "always have given the Scots a warm reception."

The visitors then passed into the physical and electrical laboratories, where Professor Stroud and Professor Thornton gave a series of unusually interesting experiments. These included wireless telegraphy, *x* rays, high-tension electrical experiments, optical experiments, the singing arc, melting iron under water, the jumping coil, floating iron-bar, and oxy-acetylene welding. There were many exhibits of technical interest.

Mr. W. S. Corder showed a series of early wax-paper negatives, daguerreotypes, calotype, and early photographic apparatus. There was also a wonderful exhibit of wood-turned articles in lignum vitæ, the hobby of Mr. L. Newbigin, pharmaceutical chemist. A few old pharmacy jars and bottles were shown by Mr. Gilderdale and Messrs. Mawson, Swan & Weddell, while the Thermal Syndicate, Ltd., had on view a splendid collection of fused silica ware. Refreshments were served during the evening, and music was supplied by Mr. Godfrey Corbett's band. The extensive premises of the College were well suited for such a reception, and there was, in consequence, an absence of crowding, which made it possible to pass comfortably from room to room. The visitors began to disperse shortly after ten, and the opinion was freely expressed that the first function augured well for the success of the Conference.

Note.—Immediately after the President's address we begin the reports of the meetings of the Conference held on Tuesday and Wednesday.

Some Problems of Interest to Pharmacists To-day.

By James Fowler Tocher, B.Sc., F.I.C.

Presidential Address delivered to the British Pharmaceutical Conference at Newcastle-on-Tyne on July 27, 1909.*

I CANNOT forget it was here in Newcastle-on Tyne that for the first time British pharmacists met together as a voluntary assembly to discuss problems of interest to the craft. The institution of the British Pharmaceutical Conference as an organisation for the encouragement of pharmaceutical research in 1863, five years prior to the passing of the Pharmacy Act which gave pharmacists a legal status, was an event of the greatest importance to pharmacists. Its avowed object of holding meetings in different parts of the country for the purpose of affording a periodical opportunity for pharmacists in the provinces meeting one another and discussing subjects of importance to us in our private and public relations, has ever been to the front. The extent also to which scientific pharmacy has been enriched by the results of work done for us cannot at the present day be accurately estimated, but it is very great—so great as to justify fully the step taken by our predecessors in the days when there was no qualifying examination to pass and no legal responsibilities to encounter in practising our ancient and honourable calling. The fundamental difference between the British Pharmaceutical Conference (an assembly of pharmacists meeting annually in different places for friendly intercourse in an unofficial manner and promoting pharmaceutical research in all its branches), on the one hand, and the Pharmaceutical Society (a statutory body, with official residence in London and in possession of a charter, with powers and duties under various Acts of Parliament), on the other hand, cannot be too often emphasised. The unofficial body, for one thing (without considering its inestimable services in research), unencumbered with legal responsibilities and duties as a body, can discuss freely, if it cares, problems which a body like the Pharmaceutical Society, and its Council particularly, cannot do, because the latter body has to administer Acts of Parliament and in doing so is in a quasi-judicial position. Here we are advocates, pleaders in court, with a cause which we deem a righteous one, and we can enter into negotiations with outside persons or bodies of persons at any time whenever we find it necessary for our own protection or for the safety of the public so to do. For instance, in an unofficial and friendly manner we could discuss questions of mutual interest with unofficial groups of members of the medical profession—questions which are scarcely ripe for treatment by the official bodies. We could thus often facilitate a change in the laws and leave the Pharmaceutical Society and its Council to deal with the problems in their riper form and to administer (as it is their duty to do) the new laws brought about by combined action and public opinion.

When I was a much younger man than I am now, I used to be puzzled why such a great country as ours should be so backward in many matters relating to medicine and pharmacy. Particularly was I struck with the fact that pharmacists in this country neither received the same training nor were accorded the same status as were given to their brethren in France and Germany and in the other great States of the Continent. It seemed to me that this country—in the very foremost rank among the nations of the world—should have no difficulty in seeing the condition of subjection of the pharmacist and at once rectifying matters. Especially did I have this view with regard to England. These were, however, the views of the unequipped, the inexperienced, the enthusiastic young man with a buoyant spirit and the will to organise humanity in one day and to put the world right in six. The power only was wanting. If that could only have been obtained, what a transformation would have been effected! But the effluxion of time gives experience; with experience comes knowledge; and the wise man knows that the cart of progress moves slowly because error and prejudice are like bars of iron thrust between the spokes, and must be removed before the cart goes faster.

* Mr. Tocher read the address in abstract, and this is given here in large type. The appended sections in smaller type are selected from the complete address.—EDITOR *C. & D.*

The General Problem.

When we consider the constitution of society, we find it to be composed of a series of classes many of which more or less depend on one another for their existence and some of which are frequently in a condition of antagonism. We have a play of forces, and it is the resultant of this which constitutes the motion of the whole—a motion which may be either progression or retrogression. It is also possible that there may be no motion, but a mere standing still. In civilised man—his institutions, his achievements, and his struggles to live and to get on—we have merely a particular example of the operations of the laws of heredity and of the influence of environment. This is an opinion based on historical and biological grounds. If a man or a group of men succeed in imposing their will upon a nation, they do so by sheer power of intellect, character, or position, or by a combination of these. The two first-named factors have been shown to be heritable, and the latter factor is also largely inherited. If a class succeed in maintaining or advancing its position, it may succeed in doing so because it is necessary to society, but it may also succeed by its being in a position of power. Its success, therefore, is the result of a complex composed of environment and of the inherited qualities of the class. But in no case can it be said that the change effected is the absolutely right one; neither can it be said that any particular standard of society is the absolutely right standard. It is more scientific to say that it is an adaptation to the surroundings or is a resultant of the forces at play and has no theoretical standard as being either right or wrong. These are relative terms referred to the standard of the person or class using the terms.

It is, I think, perfectly obvious that the condition of life of our own class or of any other class is affected by the general welfare of the State we belong to. Whatever progress the State has made in the past is shared to a greater or a lesser extent by every individual and every group of individuals within the State. So that in taking a general survey of our own position in the past, and in attempting to prognosticate our future, it is our duty to ascertain as accurately as we can the internal history of our country and its relations with our immediate neighbours, in the first instance, and, secondly, to collect data concerning ourselves as a class for analysis and deduction. No attempt has been made to do this, up to the present time, on a sufficiently large scale or in a systematic way, but until this is done we work very much in the dark. One man cannot possibly attempt the systematic collection of data; he can only indicate what data appear to be necessary. We can with truth aver that it has been our consistent desire as a body to develop pharmacy, to maintain past traditions, to ensure proper training for future entrants, to extend research, all for the one purpose—namely, of securing for the public the proper administration of medicinal compounds, while at the same time acting as guardians of the public weal with respect to poisonous materials of all kinds. This is the *raison d'être* not indeed of our own existence, but of our existence as a class. It does not matter either to us or to the State what leads any individual in early life to enter a calling or join a profession. The circumstances are interesting only to each individual. The motives no doubt include among others that of making a livelihood at an honourable calling. It has also recently been shown that there is a distinct tendency for one to follow the parental calling. But once having embarked in the chosen career, the novitiate soon finds that his life-history and the life-history of his class are no exceptions to the life-history of every individual in every class in all organised society. There must be individual efficiency and class efficiency to succeed. There must be obedience to the will of an unrelenting, all embracing social organisation. As a citizen, the pharmacist, like other citizens, must be a good citizen; and, as a skilled citizen, he must exercise his skill for the public good. No matter what individualistic or selfish motives he has, in

common with the units of every class, he must conform to the guiding principles of the State. But what he finds to be a compulsory duty he finds to be to his interest to perform. This is an axiom not peculiar to our craft, but is of general application to all citizens.

It is a practice among some of us, when discussing various internal problems, to look across the Channel and to point to the different and presumably better position of pharmacy on the Continent. It is no doubt desirable that such conditions existing on the Continent as would be deemed advantageous to us should be advocated, and if possible adopted here; but one cannot expect *a priori* that the conditions and status of the class in another State are the same in our own, or, indeed, should necessarily be the same. For one thing, the State with which we are compared may not be so fully developed as our own. Besides this, the origin and mode of development may differ considerably. This is the case with both medicine and pharmacy. On the Continent there has been more protection of class interests. Here in this country the general actions of the individual have been less restrained. The Legislature is slow to grant special and exclusive powers even to highly trained persons. Every man can be his own lawyer, his own medical adviser, and his own merchant. The development of the chief Continental races has proceeded in many ways quite differently. It is therefore seen to be unwise and impracticable to advocate the adoption *in toto* of Continental methods, or to attempt to graft them on to ours without at least considering in the first place whether they are suitable to our environment. The laws prohibiting *apothekers* from prescribing even simple remedies, or prohibiting others, although capable, from practising pharmacy, are examples. Rather should we keep in mind our own social conditions and mode of development, and continue to strive to improve by slow steps the preparation and administration of medicaments in such a way as is understood by the public as being for the nation's welfare and safety, and not for any class advantage of our own. By this method we should not only secure the national welfare in an important aspect of it, but we should obtain greater security and fuller recognition of ourselves as a class of society. No class of society that is useless to the State can hope to continue to exist indefinitely, and no class that is useful can fail in the end in getting its proper place in society. Now, that is what we are after. We perform necessary work for the State. We are protecting in certain ways its members, and we are aiding to develop the State in more than one direction. We therefore desire that that recognition and reward should be meted out to us which is the outcome of faithful service and useful work.

In considering general social problems we want to keep in mind two factors, the individualistic and the communistic. These two may be frequently in agreement, but generally they are opposed to one another. An individual has a very great interest in developing his own powers. The fact that an individual does develop his own powers as far as he can is a factor in human affairs, and that factor we recognise as individualism. But men not only look out for themselves individually, but they also combine into groups in order to attain a common mutual object which they cannot attain individually. The word communism can be used to convey the meaning here implied and to express this tendency. These two factors are certainly the chief, if not the only, ones in the social struggle for existence. But man acting collectively can do so from several motives, which might be classified as follows:

Classification of Motives, with Examples.

For Material Gain	For Privileges, "Rights" and Comforts	For Humanistic Reasons	From Desires due to other Instincts—For Honour, Position, Pleasure, etc.
Commercial firms Insurance companies Commercial companies of all kinds	Parliament Town councils County councils Associations of all classes of society—*e.g.*, law, medicine, pharmacy	Private and public philanthropy Friendly societies Infirmaries Asylums Hospitals Benevolent institutions of all kinds Scientific societies for advance of knowledge	Corporate bodies for amusement, etc.

Man individually may act, of course, from similar motives, and also from a sense of duty, and from other motives, the classification of which I need not attempt. But if we keep in view that we collectively fall into three places in the above system of classification, and act (1) for material interest, (2) privileges, and (3) from humanistic motives, we shall be in a fitter position not to confuse issues by remembering in each case what prompts us collectively to act. Let me now suggest to you what data I should like to see collected, classified, and analysed.

1. We have in the Register a list of qualified persons. An annual list of proprietors for each locality is desirable. I do not say the Pharmaceutical Society should make this list, but somebody should make it. Existing Directories could form a basis for preparing this annual list.

2. A statement of the nature of the business in each area. To obtain this, and as a first approximation, an analysis of the returns from various pharmacies selected at random throughout the country is necessary. As an example, here is an analysis of the returns of an American pharmacy, taken from the "Proceedings of the American Pharmaceutical Association," 1906 (vol. 54, p. 297):

Class of Articles	Per cent. of Sales	Per cent. of Time Required	Per cent. of Profit
Patent medicines	30	10	05
Soda-water and cigars	20	15	15
Sundries	15	15	10
Drugs	15	20	30
Prescriptions	20	30	40
Conveniences	00	10	00

3. Economic overlapping of labour.—A return of the number of medical men dispensing throughout the country is desirable. Irregular dealing in drugs is common; there are difficulties as to clubs; there is the new difficulty with respect to the sale of poisons by licence. We want information as to all the foregoing collected and classified.

4. There are economic problems of a general character. For example, there is the misplaced labour on patent medicines.

5. We want a complete survey of all articles in general use in dispensing and in demand by the public. The data as to the articles dispensed are very scant, and are insufficient for the guidance of the General Medical Council in its revision of the Pharmacopœia.

6. Legal Problems.—We have scattered through the pages of the journals full and useful information with respect to judgments. Good sound advice is also to be found there. Both should be collected, classified, and commented on.

7. A classified statement as to deaths and injuries of all kinds due to mistakes and negligence and the unskilled handling of poisons is desirable.

8. There are ethical difficulties. To what extent does etiquette prevail among pharmacists? A return as to this and as to the nature of the relations of pharmacist and physician throughout the country are both desirable.

9. We want a statement prepared showing what examinations are taken by apprentices for the purpose of securing registration. A statement of the facilities afforded to provide intending entrants with the sort of education suitable to attain their object is most desirable. Information as to the schools of pharmacy is given in various journals. The opinions of the principals as to the work done by their students, and a return as to the time taken and standard attained by the students individually, without their being named, would be of great service.

10. Scientific Problems.—We want no special return made up with regard to scientific problems because the Conference issues one annually. It appears to me that this, the tenth heading, is the only satisfactory one. We want more problems stated, perhaps, and more workers. We want results which will tend to the establishment of the manufacture of more chemicals and preparations at present supplied from abroad, and which could without difficulties, except those of capital and brains, be manufactured in this country.

Retrospective.

In taking a brief retrospect of pharmaceutical events we bear in mind that prior to 1841 we had no status, no corporate existence, and no collective powers. The great object of Jacob Bell was to organise pharmaceutical practice, to ensure that entrants were properly trained, and to raise pharmacy to the status of a profession, just as it was and is at the present time a profession on the Continent. When he succeeded in 1852 in getting the Pharmacy Bill through Parliament he realised his hope to establish corporate pharmacy. Jacob Bell, by the successful application of the collective principle in pharmacy for the first time in this country, gave status to his class and gave proof of the validity of its arguments to exist as a class. We see how slow the rate of growth is in all society, for while Queen Victoria in 1843 gave a charter to the Pharmaceutical Society, and the State gave it powers in 1852 by Act of Parliament, no powers were given to act in the public interest. Titles merely were protected. The State merely gave the Society power to render as efficient as it cared the mem-

bers of the group who banded themselves together to protect and extend their own interests. The powers, however, to act in the public interest came in 1868 as the result of long-continued strenuous endeavours on the part of the Pharmaceutical Society and other bodies and individuals. The difficulties experienced were just the difficulties one would expect to occur in a free community with so many individual and class influences at work. Now, what did the Act of 1868 accomplish in the interests of the public? What the Act of 1868 did for the public was this. It left the public quite free to take medical advice from any individual whatever. But the services of a specially trained class were rendered available to the general population—a class which, because of its training, was empowered to be the sole distributor of potent medicinal poisons. This power was given because, in so doing, the State was aware the public would be protected; but in no way was the general trade in medicines and poisons interfered with. In brief, there was no special trading privilege granted to the chemist and druggist of 1868—there was no granting of protection in the economic sense—but there was a real protection extended to the public. That was, in short, a protection of the lives of citizens from the danger of an indiscriminate and useless distribution of highly poisonous substances. All things considered, I think the Act of 1868 was a great Act—an Act which, with forty years' experience in working behind it, has proved to be of real utility to the State. Think what has been done with it. It prevents the sale of poisons by deputy—the seller must be qualified. That is one great source of protection to the public. It has produced a body of well-educated, specially trained, and highly skilled men. The Pharmaceutical Society has developed into a powerful organisation. The Council is a responsible public body with statutory powers. Its voluntary teaching department is in the hands of men of the highest scientific attainments, and it has examining powers of such a character that it can, and does, insist on a high standard of professional knowledge. It is fifty years last month since pharmacy lost Jacob Bell. Not exactly in the way, perhaps, which he thought of then have his ideals been realised. But I hold, and hold firmly, that his ideals have been in the main realised, not only with regard to education and examination, but also with regard to organisation and conduct.

Drug Companies.

This may be disputed on the ground that while the examination standard is sufficiently high, the practice of pharmacy is of a particularly variegated character. For instance, it may be said the dealing in drugs by untrained persons and irregular dispensing still continue, and there is the practice of pharmacy by drug-companies, which has now to be conducted on new lines, and is regulated by the settlement contained in the Act of 1908. The gist of what I have got to say regarding that portion of the new Act which deals with drug companies is that, while the financial side of all pharmaceutical establishments may not be under the control of pharmacists, the essential part—the management of the pharmacy in the real sense—is in the pharmacists' hands. We must remember, in making the best of things as they are, that conditions of a somewhat similar nature exist even in the medical profession. Consider, for example, hospitals, infirmaries, asylums, and other institutions for the infirm and sick. Here financial control is outside the medical profession; but this does not prevent the medical practitioner or medical specialist from duly exercising his calling. The existence of these institutions is, of course, due to a different motive on the part of the community. The motive here is humanistic—is due to sympathy for the weak rather than a desire for material gain on the part of the promoter—but this does not alter the position of the qualified practitioner towards the promoters. The strong desire to trade for material gain cannot be suppressed either in pharmacy or in any other calling. Here, then, we have in pharmacy a concrete example of the operations of the two factors—individualism and communism—which permeate the whole State, and it appears to me that the latter factor is gaining ground. This requires and deserves the closest study from our administrators, for unless we collect and collate the facts and keep a grip of the problem, our insight and foresight will be poor, and our actions feeble and futile. It is the paramount duty of our leaders to consider the play of these two factors. Neither is fundamentally right or wrong. They exist. They are the products of the fundamental human instincts, and force themselves upon the attention of all students of history. All we can do is to strive to know the standpoint of each, and to act only for the public weal;

> "For when disputes are wearied out
> 'Tis interest still resolves the doubt."

The Advent of the Licence.

The company problem came before us as the result of a defect in the Act of 1868. It could not be reasonably expected of the Legislature to foresee the probable advent of companies and to divine the legal judgment with respect to a "person." The licence problem was forced upon our attention in quite a different way. We were told that the facilities for the purchase of arsenical and other preparations in large demand for agricultural and horticultural purposes were inadequate in many parts of the Kingdom. A sort of investigation was held, the outcome of which was that Parliament gave power in April to local authorities to grant licences (where they consider necessary) to sell mixtures of one or two very potent poisons—namely, arsenic and nicotine. The number of the poisons is restricted to two; the purpose for which the poisons are to be used is restricted to one—namely, the destruction of weeds and of parasitic life in the domains of agriculture and horticulture; and, finally, the licence for the sale of such poisons is presumed to be given only in cases where, through there being no chemists and druggists in the vicinity willing to sell, the facilities were inadequate for their purchase by the public. We must try to ascertain, if possible, the object of the Legislature in altering the excellent provisions of the Act of 1868 with respect to these poisons, especially since the Pharmaceutical Society and its officers have shown that there was no necessity to alter or amend the Act in this direction. Just consider for a moment the nature of the practice of pharmacy. Like the practice of medicine or of law, or of any of the trades, callings, or professions whatever, it is not of a uniform character. Just as we have medical specialists of all kinds, and general practitioners with all kinds of practices, so do we have pharmacists with all sorts of businesses. This arises, in the pharmacist's case, from local social conditions, from the environment of the pharmacist, from the various branches which constitute the craft, and from the pharmacist's own tastes. You know quite well that in most of the chief city pharmacies no sheep-dip is stocked or sold, and you are also aware that in many provincial pharmacies dips and weed-killers and general merchandise, together with drugs and poisons, are sold, while no dispensing worthy of the name exists. The high-class pharmacies of the cities do not stock those agricultural poisonous mixtures, either because there is no demand for them there, or because the proprietors do not want to sell them, or both. These are the facts. Packed poisons for general purposes can be got at any pharmacy. Poisons for one or two specific purposes may not. But let me pursue the subject further from another side. There has been a very great deal of evasion of the provisions of the Act of 1868 with regard to the sale of packed agricultural poisons. I admit it has been difficult to catch, redhanded, persons infringing the Act. The fact remains, however, that the ironmonger, the seedsman, and also the general merchant, are reputed in many places to be the chief, and sometimes the sole, distributors of the very poisonous mixtures we are considering. Hence it has come about that pharmaceutical authorities have been induced to agree to the institution of another form of distribution, applicable only to two poisons under certain conditions. That form of distribution is an experiment, in my opinion, of a dangerous nature. The theory is that the local authority will not grant licences except where there are no qualified vendors within a reasonable distance, and, therefore, where facilities are inadequate. How is this working out in practice? All over the country we find local authorities granting licences indiscriminately. We have notable exceptions here in the North of England—for example, Liverpool, Hull, and Newcastle have very properly refused licences, on the ground that the facilities are ample. Newcastle is a notable case where the authorities

took the pains to study the object of the Act and the interpretation to be put upon the Regulations. We members of the Conference in session assembled must heartily congratulate our Local Secretary, Mr. Clague, on the able way in which he put the case for pharmacists before the City Council. The members of the City Council clearly apprehended the provisions of the Act, and promptly decided that the facilities in and around Newcastle were amply sufficient. It is clear that many of those local authorities which have granted licences, despite the fact that facilities are abundant in their localities, have done so because they are under the exceedingly false impression that pharmacists have a thoroughgoing monopoly, which they exercise in their own interests and against those of the public. What are the facts? The poisonous mixtures are put on the market by manufacturers just as other substances are put on the market. There is competition, and often fierce competition, among pharmacists in these as in all their other commodities. It is not because we are trying to secure an advantage over any class whatever (for we have no such advantage of any kind commercially) that we seek to regulate the sale of poisons and restrict their output to pharmacists, but it is because we are conscious of the danger to the public arising from the fact that poison at all is at the command of any member of the public ignorant of its properties and incapable of prescribing the necessary precautions in distributing it. In my opinion, we must either have an amendment of the Act of 1908 itself—such an amendment as was drafted by Mr. Glyn-Jones, which was rejected by Lord Crewe—or a change in the Order in Council to attain the object Parliament had in view in creating licences. If the change is to be made in the Act itself, the addition of the following sentence to paragraph 2, Clause 2, might suffice :

> Provided that no licence shall be granted by any local authority to any person whose place of business in which he desires to sell such substances is less than six miles from any chemist and druggist who can meet the reasonable requirements of the public.

If licences for these poisonous mixtures are necessary, they are necessary only where there are no qualified persons willing to sell. This is axiomatic. Licences granted indiscriminately simply means the institution of a new class of poison-vendor. This is how Clause 2 of the Act of 1908 is to work out in practice as it stands. The members of this new class, who, for purposes indicated, are to be put on a level with pharmacists, are to be composed of persons who have had no prolonged apprenticeship, no education in schools of pharmacy, and no technical skill whatever. The new vendors of packets of poisons for agricultural and horticultural use will differ from the Irish druggists, as to their powers of sale, only in degree. Their existence, and the extension of their sphere to other poisons, might soon be justified, owing to the demands made upon them by the public. With the aid of manufacturers, they will tend to pass from distributors of specific poisons to distributors of all poisons whatever. It must be pointed out that the Poisons and Pharmacy Act of 1908 might be utilised to further the project of licensing persons to sell all sorts of poisons, for provision is made in the Act for the addition of poisons to be sold by licence if considered necessary. There is one specific qualification to this, however, but it is conceivable that it may be disregarded. The qualification, which ought to prevent the extension of the list to general dealing in poisons, is that, whether the poison is arsenic or nicotine, or any other which may in future be added to the list, the poison must be for agricultural or horticultural use only. Rather than permit the principle of licensing to sell specific poisons in general I would be inclined to advocate the creation of a new class of druggist, such as exists in Ireland and on the Continent. This is undesirable and unnecessary, because the public is far better served by the highly trained pharmacist; but it is distinctly preferable to the principle of licensing, with its attendant dangers. Time will prove whether the experiment which the Legislature has been induced to make is a profitable and desirable one. The experiment is not ours, it is the realisation of a Departmental view long held, and my last word on the subject is that the Privy Council, through the Order now in force, shows that it is prepared to accept the risks.

Some Economic Problems.

I propose to summarise in the briefest possible manner what I have to say on economic problems, the art of prescribing, education, and examination. As I hope to open a discussion on medical dispensing to-morrow, I merely say here now that the dispensing of medicines by pharmacists, rather than by medical men, would be advantageous to the public because there would then be a double check in the administration of medicine. The pharmacist, in dispensing a prescription, checks the medical man's prescribing, and the medical man himself checks the pharmacist's dispensing. I recognise that, to be practical, one must have a definite plan to aid in the bringing about of the differentiation. That plan I hope to submit to-morrow.

I have made an attempt during the past year to collect data respecting the economic conditions prevailing locally throughout Great Britain without much success. The number of replies to inquiries made has been small. Those who replied have, however, given valuable information which would form the basis of further inquiry. I wish here most cordially to thank all those who sent in replies bearing on dispensing problems, economic and technical. I wish also to thank most cordially those members of manufacturing firms, and members of the pharmaceutical Press who sent me information bearing on the prices of chemicals and drugs during the past century and on other economic points. Lastly, I have similarly to thank the officers of the Pharmaceutical Society for the material they have kindly placed at my disposal.

TABLE I.—Minor Examination.

Years	Number of Candidates Examined		Number of Successful Candidates		Number of Persons on the Register	Number added each Year
	England	Scotland	England	Scotland		
1870 ...	258	31	177	22	—	—
1871 ...	324	47	204	30	—	—
1872 ...	472	35	264	23	10,389	—
1873 ...	745	75	410	46	10,896	507
1874 ...	980	180	300	78	10,939	43
1875 ...	221	64	104	37	10,941	2
1876 ...	391	77	191	41	10,857	−84
1877 ...	442	94	229	70	11,013	156
1878 ...	528	111	257	67	11,022	9
1879 ...	525	131	268	72	11,252	230
1880 ...	551	102	250	61	11,154	−98
1881 ...	567	83	278	47	11,347	193
1882 ...	572	78	242	44	11,172	−175
1883 ...	632	134	235	59	11,417	245
884 ...	722	158	245	81	11,165	−252
1885 ...	744	211	255	96	11,348	183
1886 ...	824	246	304	94	11,249	−99
1887 ...	867	215	405	101	11,584	506
1888 ...	884	207	398	112	11,668	510
1889 ...	793	220	313	127	11,894	439
1890 ...	864	293	359	165	11,987	524
1891 ...	1,070	446	423	258	12,444	681
1892 ...	578	293	208	150	12,315	358
1893 ...	817	372	285	184	12,562	469
1894 ...	970	440	344	160	12,596	524
1895 ...	819	485	245	202	12,800	447
1896 ...	793	666	260	243	12,913	503
1897 ...	863	578	270	190	12,964	460
1898 ...	1,162	517	354	181	13,208	535
1899 ...	1,331	485	377	175	13,347	552
1900 ...	1,377	513	366	182	13,627	548
1901 ...	1,078	471	310	184	13,356	468
1902 ...	1,064	415	313	184	13,420	497
1903 ...	1,144	532	352	172	13,436	524
1904 ...	983	527	397	187	13,619	564
1905 ...	877	421	327	141	13,820	468
1906 ...	823	341	275	125	13,827	400
1907 ...	765	351	274	137	13,990	411
1908 ...	714	266	249	105	13,897	354

My object in collecting data of an economic nature was to aid pharmacists in satisfying themselves as to the actual condition of pharmacy from an economic standpoint, and as to what extent changes had been wrought owing to the advent of the modern factors in civilisation. I am sorry that, owing to the meagre data obtained and to the time and trouble required to incite people to give information and to work up the data when supplied, I have been unable to do more than begin the task I set myself.

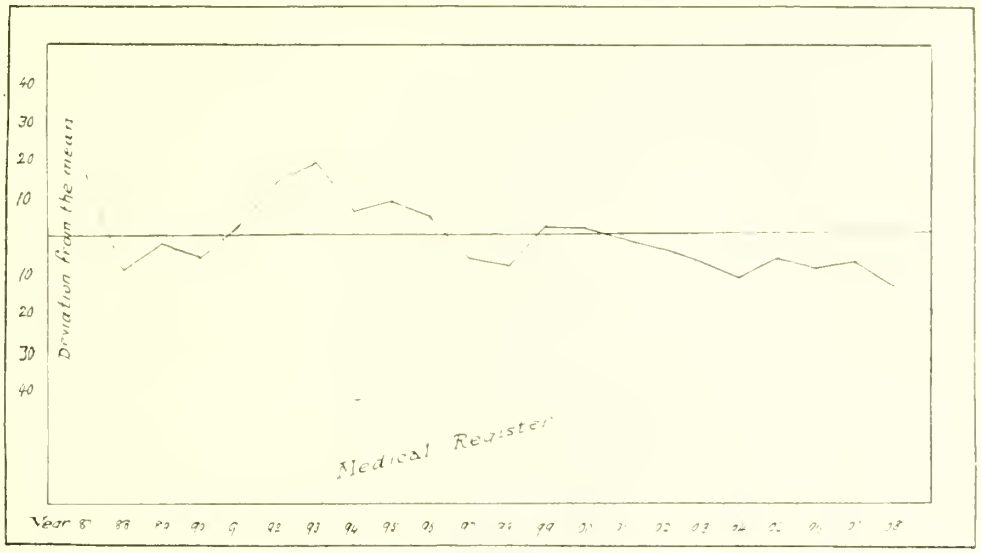
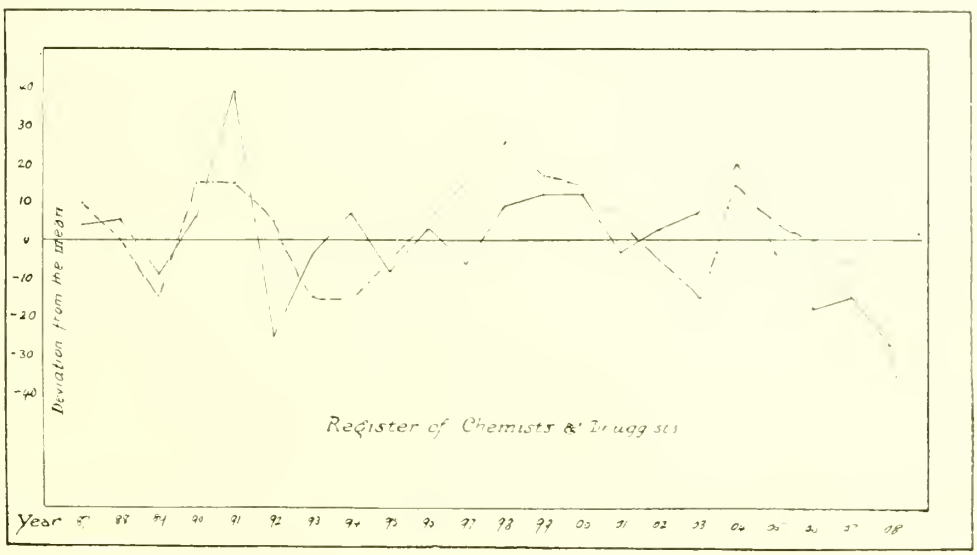


TABLE II.

Years	Excess or defect of the Number of Candidates for the Minor Examination. Entering England	Entering Scotland	Passing England	Passing Scotland	Excess or defect of the Mean Number on the Register	Excess or defect of the Mean Number added to the Register	Actual Number added to the Register	Percentage excess or defect of the Mean Number added to the Register	Percentage excess or defect of the Mean Number added to the Register	Excess or defect of the Mean Number added to the Register	Actual Number of Persons added to the Register
	PHARMACEUTICAL DATA.								MEDICAL DATA.		
1887 ..	−71	−196	82	−65	−1,383	17	506	3.48	15.31	209	1,531
1888 .	−84	−204	75	−84	−1,309	21	510	4.29	−10.44	−138	1,184
1889 .	−145	−191	−10	−39	−1,073	−50	439	−10.24	−1.29	−17	1,305
1890 .	−74	−123	36	−1	−930	−35	524	7.16	−4.24	−56	1,266
1891 ...	132	35	100	92	−523	−192	681	39.26	1.74	23	1,345
1892 ..	−360	−118	−115	−16	−652	−131	358	−26.79	14.45	191	1,513
1893 ..	−121	−39	−38	18	−405	−20	469	−4.09	19.44	257	1,579
1894 ...	32	29	21	14	−371	35	524	7.16	7.67	104	1,426
1895 ...	−119	74	−78	36	−167	−42	447	−8.59	9.38	124	1,446
1896 ...	−145	245	−63	77	−54	14	503	2.86	4.77	63	1,385
1897 ...	−75	167	−53	24	−3	−29	460	−5.93	−6.96	−92	1,230
1898 ...	224	106	31	15	241	46	535	9.41	−8.47	−112	1,210
1899 ..	393	74	54	9	330	63	552	12.88	2.19	29	1,351
1900 ..	439	102	43	16	660	59	548	12.07	1.74	23	1,345
1901 ...	140	60	−13	−8	389	−21	468	−4.29	−.30	−4	1,318
1902 ...	126	4	−10	18	453	8	497	1.64	−3.56	−47	1,278
1903 ..	206	121	29	6	469	35	524	7.16	−6.73	−89	1,233
1904 ...	45	116	74	21	652	95	584	19.43	−11.65	−154	1,168
1905 ...	−61	10	4	−25	853	−21	468	−4.29	−6.20	−82	1,240
1906 ...	−115	−70	−43	−41	860	−89	400	−18.20	−9.46	−125	1,197
1907 ...	−173	−60	−49	−29	1,023	−73	411	−15.95	−7.64	−101	1,221
1908 ...	−224	−145	−74	−61	930	−135	354	−27.61	−13.99	−185	1,137



It is of interest to note how small a class of the community we are numerically. There are about 14,000 pharmacists on the Register, which works out at about thirty-five per 100,000 of the population, or a little over three per 10,000. We are small numerically compared with the medical profession, for they number over 40,000, or approximately ten persons out of 10,000, or one in 1,000 of the population, are medical practitioners. We are quite aware that those on the registers are not, all of them, in actual practice; they represent only those qualified to practise. In the case of the medical profession the many public, medical, and scientific appointments of all kinds, both at home, in the Colonies, and India, which have to be filled by registered medical men, together with the ordinary demand for medical aid generally, account for the comparatively greater number qualified to practise medicine, compared with the numbers following the much more restricted craft of pharmacy. Now, it has been observed by some that the number added to our Register annually in recent years has been uniformly decreasing. This has been explained by a few as due to the increased stringency of the qualifying examination, but this is not the cause. No doubt a change in the standard affects the number passing just before and after the change. An examination of medical and general economic data soon shows, however, that the fluctuations are mainly due to economic conditions. The number of annual additions to the medical register has been slowly decreasing during the entire past decade, but the fact may be put in another way. From 1891 to 1896 there was a marked rise in the number of additions. In our case, the rise in the numbers added to the Register took place in 1891 and from 1898 to 1900, and were due to a coming change in the standard of examination, and to a coming change of fee. Otherwise the periods of increase in both registers correspond to periods of relative prosperity. The periods closely correspond to the years when general wages were higher, unemployment was less, and with other favourable economic conditions. The accompanying tables show the absolute and relative rates of increase and decrease based on the figures given in both the medical and pharmaceutical registers and on the Government returns:

Unemployment.

In view of the fact that there has been a great wave of depression in trade generally, greatly increasing the number of unemployed, it is satisfactory to note that unemployment is rare in pharmaceutical life. Taking at random from the journals (chiefly from THE CHEMIST AND DRUGGIST, which contains the greatest numbers) the excess of situations wanted over situations open, for a series of years, one finds that the maximum (and that for a short period) reaches only 0.5 per cent. of registered men per week. This does not mean that 0.5 per cent. are ever in distress, but merely the fluctuation (due to seasonal trade) in the employment of qualified assistants. We may take it that practically all pharmacists who wish to work are employed, but there are a few "unemployable" men whose unfitness is due to inebriety or to unsuitable age, or both. On the other hand, a study of house rentals, habits of life, and of death duties clearly shows that the average income of the pharmacist is a comparatively small one, and that the accumulation of wealth, if not foreign to his nature, is at least foreign to his experience.

"Patents."

The sale of patent medicines from the medical standpoint is of doubtful service to the community. From the economic standpoint it does not bulk largely in the purchases made by the British public. The British citizens spend about 4*l.* 6*s.* annually in alcohol, but only about 1*s.* 4*d.* on patent medicines. Putting it more from the point of view of the pharmacist, if every registered person sold patent medicines, he would draw on an average about 20*l.* annually from their sale. The profit from the sale of patent medicines is a small one on an average, and their sale must be reckoned as a small branch of a pharmacist's business. The suggested classification and analysis of income from sales I made in my introductory remarks would help the solution of the economic problem considerably. It seems to me that a much heavier stamp-duty than that at present in force should be imposed on articles held out to have curative properties, which contain patent drugs, whether the articles are nostrums or proprietaries. The purchase of medicines of well-known composition, such as pharmacopœial preparations and others from formulæ published in standard works of reference, is quite a different purchase in its character from that of articles labelled with statements as to their efficacy. In the latter case the article takes the place of medicine supplied from a physician's prescription, which latter results from skill applied in each particular case. In my opinion, therefore, the disclosure of the contents of all packed remedies, consisting of drugs in common use, advertised or for sale (so desirable for the information and safety of the public), should be accompanied by a stamp-duty to balance the loss due to the unemployment of skill in diagnosis, treatment, and preparation of remedy. A tax of this kind would yield a sum which it is very necessary should be utilised for the public weal by the Pharmaceutical Society in vigorously administering the law respecting poisons.

Spirituous Medicines.

A stamp-duty on proprietary medicines declared to have specific virtue is a more rational proceeding than that of imposing a tax on alcohol which covers not only alcohol consumed as a beverage, but also that used as a medicine. I think it is in agreement with the instincts of humanity to aid the weak, the suffering, and the incurable—all the more so if they are poor as well as ailing. The validity of the principle of imposing a tax on alcohol as a beverage we need not discuss or dispute. The principle of taxing medicines ordered by medical practitioners and dispensed by pharmacists is a bad one, because it operates more against the poor than the rich; and a tax on alcohol means a tax on many of the most effective and most frequently ordered remedies for the sick. The value and universal use of alcohol as a solvent of the active constituents of drugs cannot be disputed, and at the present time no other liquid is known which could take its place. Under these circumstances it is easy to understand the action of manufacturers, retail pharmacists, and pharmaceutical bodies generally, in discussing the increase of the spirit-duty for the purpose of representing to the Chancellor of the Exchequer its injurious economic effect on hospitals, friendly societies, and the sick generally, and, if practicable, giving rebate on alcohol used for medicines. The principle of distinguishing between alcohol used as a beverage and used as medicine is sound, but in practice there seem to be many difficulties. In the first place, we use and sell alcohol in flavouring-essences, perfumery, and in such potable tinctures as cardamoms. These are all liable to misuse by the public, and in the case of perfumery we have a luxury such as whisky is. If no relief of any kind is granted, then retail pharmacists, who have not shown the business instincts which manufacturers and others affected have done, must advance the price of spirituous preparations. In other words, the public must pay the tax. This is what was intended; but it is extremely doubtful whether pharmacists will be able to recover from the public the full sum which they are now called upon to pay.*

The Average Prices of Drugs.

and the character of prescribing a hundred years ago and to-day have engaged my attention. All I have to say here is that the pharmacist pays on an average almost exactly one-half what he paid a hundred years ago for the same drugs.

The data, as already mentioned, are far from complete. I have taken the articles quoted in a price-list of 1810 and compared the prices quoted then and in 1824, 1844, 1854, 1866, 1872, 1886, and 1909 for the same articles. The results of these and similar analysis I do not in the meantime intend to disclose, but it will be of interest to state that a pharmacist in 1810 purchasing equal quantities of 155 drugs and chemicals, paid on an average 11*s.* 6*d.* per lb., while the pharmacists of 1909, purchasing equal quantities of the same 155 articles, pays on an average 5*s.* 7*d.* per lb., or less than half the sum. It is necessary to point out that the mean value for 1810 and 1909, reckoning the actual quantities sold on an average throughout the country, may differ considerably from the two figures just given. The result is given for the purpose of showing that articles in common demand at both periods are on an average much cheaper in 1909. Such chemicals as phosphorus and nitrate of silver, and such drugs as extract of cinchona, extract of belladonna, opium, ipecacuanha, and the oils of cinnamon, cloves, and aniseed, show the greatest variability in market value. Most of the 155 articles quoted are good marketable commodities to-day.

Prescribing—A Comparison: 1810 and 1909.

As far as prescribing is concerned, the character of that of 1810 is equal to, if not distinctly superior to, that of 1909. I invite members to compare the samples I give of both and consider whether the time has not come for a thoroughgoing agitation as to methods of prescribing. The fact that medicine is now less empirical, and is becoming more scientific in its practice, is not a valid reason for predicting the decay of prescribing. This is one of the problems which such a body as a joint committee of the British Medical Association and the Conference might fitly take in hand. It is the best thing, and not the handiest thing, the patient ought to get.

* As a readier means of recovering the duty, "Budget Stamps" intended to be affixed on articles affected, such as perfumery, have been put on the market by at least one enterprising firm. These stamps show to the public the increase in price of each article due to the extra duty imposed by the famous Budget of 1909.

The striking difference between the two periods is the detachment shown by the earlier physician in considering what remedies he should order. Here are one or two examples taken at random:

Die Jovis 5to Martii 1806.

Mrs. Sarah Head.

℞ Pilularum galbani compositarum,
Aloes socotrinæ ... ... aa. ʒj.
Olei carni ... ... guttæ vj.
Syrupi zingiberis.
Fiant pilulæ triginta. Sume unam ter die vacuo stomacho.

Mrs. Middleton.

℞ Infusi gentianæ compositi ... ... ʒviss.
Tinct. colombæ ... ... ʒiss.
Misce. Cape cochlearia duo ter quotidie.

Mr. Chaloner's Servant.

℞ Myrrhæ pulveris ... ... ʒj.
Kali præparati ... ... ℈ij.
Ferri vitriolati ... ... ℈iss.
Tincturæ colombæ ... ... ʒss.
Tincturæ digitalis ... ... guttæ lx
Aquæ menthæ piperitidis ... ... ʒvij.
Misce. Cape cochlearia larga tria mane et vesperi phiala agitando.

In our capacity as pharmacists we observe the purposefulness of the prescriber in the foregoing prescriptions. These prescriptions are fair samples of what the apothecary of 1810 dispensed. At the present day there is no doubt an equal purposefulness and a greater knowledge of the therapeutical action of remedies in many cases throughout Great Britain. Unfortunately now, however, there is a considerable admixture with careful prescribing, of slackness, inaccuracy, and careless prescribing. We have too many of the type.

Tablets, No. 184.

Take as directed.

And—

Mist. tonic.

Take as before.

The great development of medical work in other directions has led to a considerable extent to the neglect of the art of prescribing. It has been suggested that the necessity for prescribing scarcely now exists. Much of the skill employed by medical practitioners is directed towards prevention; and, in the matter of treatment, the pill, the mixture, and the lotion are giving place to the serum, the vaccine, *x*-ray treatment, and the like. It is undoubted that the practice of medicine is being modified and extended in many ways by discoveries in the domain of bacteriology, parasitology, physiological chemistry, and other sciences. But I am no believer in the cry that the necessity for prescribing is going. Rather do I see the necessity of its being extended and placed on a sounder scientific basis. The fact that medicine is now less empirical and is becoming more scientific in its practice is not a valid reason for predicting the decay of prescribing. It rather would lead one to expect more scientific treatment. A brief consideration of the construction of the human body, keeping at the same time in mind that man is an animal, forces me to the conclusion that remedies, both external and internal, will always be necessary—at least long beyond our time. The problem is in the end a biological one, and our experience in all biological phenomena is well summed up in the trite aphorism, *Natura non facit saltum*.

Education and Examination.

I have been for long interested in the problems of education and examination. Notwithstanding contrary opinions which have been expressed, I consider the clause empowering the Pharmaceutical Society to require evidence of training prior to examination a very important and necessary one, the adoption of which was one day inevitable if we consider the course of evolution of the pharmacist. It is all the more satisfactory that the principle has been incorporated in an Act of Parliament which includes a practical solution of difficulties respecting the practice of pharmacy. But surely the principle of training prior to examination can stand on its own legs; the enforcement of the principle must be brought about gradually and after full information has been obtained by the Pharmaceutical Society as to the facilities for study throughout Great Britain. The standard of the qualifying examination has been from time to time adversely criticised. A standard of qualification must not be confused with the want of opportunities for the full exercise of skill, and that is what is the trouble to-day in industrial England. The standard must be maintained. Again, we have the cry, What is the use of the Major? The answer is that the pharmaceutical chemist supplies the demand, and that is all that can be said of qualified pharmacists. The Major of the future, if a curriculum is imposed, will be equivalent to a science degree. It will be open to the pharmaceutical specialist of the future to become either a diplomate or a graduate. I am not in the least depressed because up till now the number of pharmaceutical graduates is small. Two factors, which will soon be removed, operate against the facilities being taken advantage of. The first is the natural diffidence to make a beginning, and the second is the want of a compulsory curriculum. My reasons in 1902 for advocating the University training and a special degree and my reasons to-day which I give in full in my address, are the same. We want special laboratories in technical schools and in Universities, devoted to pharmaceutical research, in order to keep abreast of the advance being made—especially on the Continent—in all departments of our work, and in order that we may compete in the production of synthetic and other remedies in the markets of the world.

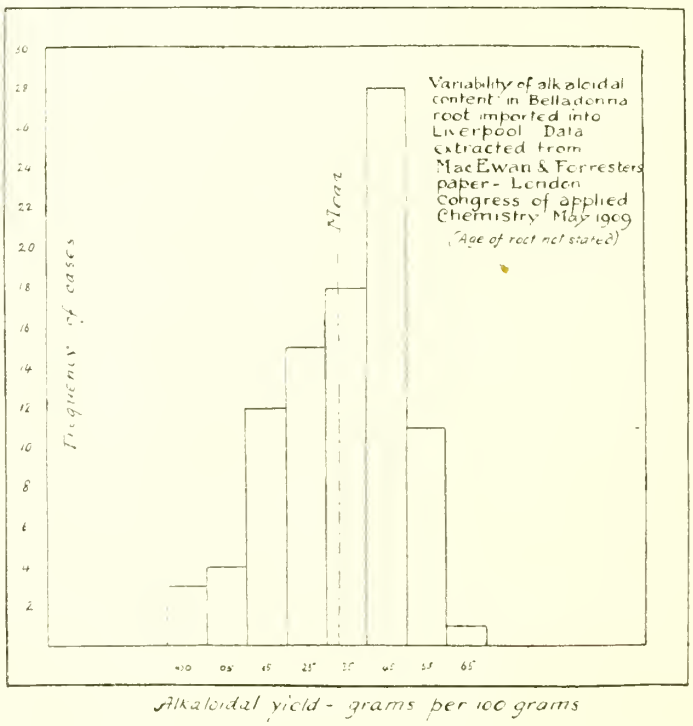
Once a definite system of education is a legal necessity prior to examination, the student will, in addition to his training at the schools of pharmacy in the subject of pharmaceutics, have most probably to take his botany and chemistry at a University or at recognised technical colleges and schools. The first part of the scheme of 1902 will then be realised. The connection established between the student and the University is sure to lead the more proficient and those whose interest it is to acquire the knowledge, such as the works-chemist, to proceed to the science degree. At the present time the professional man in charge of the manufacturers' laboratory is usually a pharmaceutical chemist or a graduate. In view of the great strides taking place in our branch, as in all branches of science, it is of the utmost importance that the special training necessary for the laboratory and the works should not only be continued, but extended in every way likely to aid in the discovery of new compounds and in their manufacture on a suitable scale in order that British goods may keep their place in the markets of the world. These were my reasons then, and these are my reasons now, for advocating special laboratories in technical schools and in Universities equipped for pharmaceutical research, and for advocating the institution, in some of the Universities at least, of a science degree suitable for pharmacists. Glasgow and Manchester are now open to the pharmacist, and I hope the day is not far distant when the special facilities granted will be taken advantage of by those for whom they were created.

Pharmacopœial Revision.

Early in the year the Committee of Reference in Pharmacy appointed by the General Medical Council reported to the Pharmacopœia Committee the results of work done on the Pharmacopœia up to October 29 last. The recommendations appear on the whole to be satisfactory, although it seems to me that in certain directions the committee tends to go further than is desirable in a work issued by authority and used as a standard. Professor Greenish, on behalf of the committee, has drawn the attention of pharmacists to the recommendations made, and has invited and received criticisms. This method of courting criticism prior to publication is an excellent one, and is a new departure in pharmacopœial revision. It seems, however, to me to be desirable that the committee should have gone even further than to invite, through the medium of the Press, criticisms on its work. A publication like the British Pharmacopœia cannot be the work of one man. It is not and never has been. It is the collected experience of trained men in every department of science coming within its scope. It is because it is intended to be a work of collective experience that the General Medical Council has invited representative pharmacists to report their views to the Council. We as pharmacists must feel satisfied that the General Medical Council continues to take reasonable means of ascertaining our views respecting pharmacopœial methods and matter prior to the issue of the standard and guide which it is the privilege and legal duty of the Council to prepare and to issue from time to time. It is, in my opinion, the further duty of the Committee of Reference in Pharmacy not only to conduct experiments and to report thereon to the Council, but also at the same time to make an organised attempt to glean the experience of pharmacists generally, and to invite capable investigators within their own ranks, but outside the committee, to undertake definite sections of work, repeating what may have been done by the committee, and, between them, covering the whole

Pharmacopœia. It is because in the past we have had embodied the results of a few experiments of one person that inadequate formulæ have appeared in former issues. It is no valid argument to say that pharmacists' monographs in various journals are studied, or that pharmacists have an opportunity if they wish of aiding by sending data and criticisms to the committee. I could name two dozen and more capable pharmacists who could give valuable assistance to the Committee of Reference if their services were enlisted in a systematic way on definitely stated problems allocated to them. Their data and experience could be collated by the committee, and such as were deemed useful could be utilised in the report to the Council. There is no publication within the wide scientific field or in the whole Kingdom which, from its matter and its importance, is so fitted for a scheme of co-operative investigation as is the British Pharmacopœia. I pass over what I have to say on various individual drugs and chemicals for want of time.

It is satisfactory to note in the report the recommended addition of a test for lead of so delicate a nature as that described. Lead is so frequent and so dangerous an impurity that the possibility of its presence should be completely excluded. The changes recommended with respect to tartaric acid, ether, aloin, aloes, liquid extract of cascara sagrada, collodion, and most of the others are welcomed. It is desirable to know whether, in practice, the preparation named "acetum cantharidini" is likely to prove as effective as our present "acetum cantharidis." If so, there is every reason why the former should be adopted, for in the former we have a definite proportion of an active chemical substance of known composition as against a variable proportion of active and inactive substances in the latter. The assay process for cantharis is a desirable addition. The data upon which the minimum percentage of cantharidin is based would be interesting, and ought to be published by the committee. The degree of precision of this and other methods of assay is an important factor to be borne in mind when the variability of the active content is being determined. It is very desirable that the limit of precision should be accurately known in each case where the natural variability of alkaloidal content is being studied.



The natural variability in the proportion of the active constituents of plants has not yet been satisfactorily dealt with. It is true that the range is known with fair accuracy in the cases of aconite, belladonna, hyoscyamus, and even digitalis, but the frequencies of specific values are unknown, simply because a sufficient number of determinations of material under similar conditions as to environment and the like has not yet been made. It would be in my opinion a retrograde step to specify, except in cases where the variability in the content is demonstrated to be small, the percentage limits for active constituents of drugs. Let me give a concrete example. It is one of the recommendations of the Committee of Reference in Pharmacy to place dried belladonna-leaves containing from 0.3 to 0.4 per cent. of alkaloid on the official list. Consider for a moment the known variation of English crops of belladonna-leaves, both cultivated and wild. As low a proportion as 0.1 per cent. has been observed over a series of years. An assumed mean of 0.5 per cent. is given, but little or nothing is known as to the frequencies of the various proportions noted. We quite appreciate that environment affects the proportions found. How far selection is operating in the proportion of content has not been determined or even considered. It would therefore be unfair to give a definition which would lead to the rejection of plants and drugs generally, whose proportion of active constituents fall below or above a proportion quite empirically arrived at. It is unsound to insert limits of values, even after the true range, mean, and variability of the proportions are found, and the true nature of the distribution of active content determined. It is more scientific to specify the strength in the various preparations from the drug—the tincture, extract, and so forth—since the proceeding eliminates all natural variations. The variations in the activity of certain toxic drugs were considered and pretty fully discussed at the recent meeting of the Pharmaceutical Chemistry Section of the Seventh International Congress of Applied Chemistry held in London in May. The London meeting was a great success, and the problem of variability seems to have been the feature of the Pharmaceutical Section. I trust that every assistance will be given by British pharmacists to further international inquiry as to the active principles of toxic drugs. The data already supplied to the Congress are valuable and suggestive. Take, for instance, the variability of the alkaloidal content of belladonna-root as imported into Liverpool. In the accompanying diagram a graphic representation of the variability is given which shows at a glance the wide range. A further analysis of the distribution of values of this series reveals the fact that the mean value is 0.339 per cent., while the most frequent value is 0.451 per cent. I should like to conclude my remarks on pharmacopœial revision by saying that I hope I shall not be considered hypercritical by pointing out that in such minor matters as the use of the word "part" and the definition of the word "minim" precision of language is desirable. It should always be clear to the reader that either parts by weight or parts by measure is meant when "parts" is stated, and on more than one occasion it is not quite clear which is meant in the present edition. The student, also, who wishes to verify that "minim" is the volume at 62° F. of 0.9111583 grain of water must, after trial, look with admiration and awe on the chemist who makes such wonderful weighings. An indication that this relation of volume to mass is arrived at by computation after observation, rather than by direct observation, would be more consistent with scientific method.

Concluding Remarks: The Object of Research.

The rapid development of chemical science in every direction has produced and is producing to-day a profound effect on the theory and practice of pharmacy. A quarter of a century ago we had already begun to perceive the reformation. The synthesis of alizarine indigo and the innumerable colouring-matters, together with the

classical synthesis of conine, marked the new departure—the onset of the revolution. In the domain of organic



MR. T. MALTBY CLAGUE,
Honorary Local Secretary, 1889 and 1909.
[*Photo by Jas. Bacon & Sons.*

chemistry we see a great future for pharmacy, and for much more than pharmacy—the human race. The synthesis of the sugars, the purine basis, substances of alkaloidal nature, and innumerable other compounds are steps forward to meet the physiological chemist who is striving to reduce his empirical formulæ for his series of organic substances to rational constitutional formulæ, based on the same conceptions as those adopted by the organic chemist, and proved valid as guides by the only possible test—namely, that of experience.

A century ago John Dalton published the first volume of his "New System of Chemical Philosophy," in which he propounded his atomic theory—a conception which has stood the test of a hundred years. Every day since it has been tried by experiment and observation by men of science who grasp its meaning. To-day it stands before the world the only medium whereby chemists convey the results of their work, and the only basis upon which they found other theories to describe the varied phenomena of inanimate nature. To us it all seems so simple that, almost forgetting the process of evolution, it seems as if it had always been part of the knowledge of mankind. But let us try to give a shorthand account of chemical processes without it, as the contemporaries of Dalton had to do, and we then see how far-reaching, how important, how grand a conception the atomic theory really is. It is the basis of all the other theories in vogue in chemical science, and, without it, the fundamental "laws" have no existence. By its aid organic chemists are accomplishing that peaceful evolution of the beginning of which we are the proud witnesses. By its aid we have been able to form a clearer conception of the composition of the earth's crust, which is everywhere at once so much alike and so different in detail. It was natural 100 years ago to think of the atom as the one ultimate stable and indestructible unit, for all the experience of scientists led them to think of it as such. It detracts neither from the beauty nor from the validity of the atomic theory to proceed, as the result of experiment, to the conception that the atom, under certain conditions, disintegrates. Rather does it enhance the Daltonian hypothesis. The advent of the corpuscle or the electron seemed to some to mark the exodus of the atom. That could never be the view of any intelligent observer, for the fundamental conception of an electron is that it is either part of an atom or is operating on one. A hundred years ago Prout, without, however, the basis of observation Dalton had, formulated the hypothesis that all matter may be regarded as being derived from a primary substance like hydrogen. To-day scientific men do not suggest that hydrogen is likely to be the primary substance—indeed, hydrogen is viewed as being a complex. The conception of Prout was not supported by much experimental data. To-day, however, the experimental data point to the likelihood of Prout's conception being wrong in one respect only—viz., in the belief that hydrogen was the elemental substance. The brilliant researches of Thomson and his school lead us to hope that in the electron we shall be able to classify the results of our experience in chemical phenomena. But, if so, we must not jump to hasty conclusions or make illogical statements to the effect that the electron really exists. It does exist, but only in conception; so that we need not hope to be able ever to perceive the elemental unit. Even if it did exist, its size is far beyond our limits of conception. Just as with the atom, so much more so with the excessively minuter electron must we conceive of its existence, and form a mental picture which will enable us to describe, in shorthand, our views of the phenomena we observe. The triumph of what we call mind over what we call matter is not a triumph due to our perceptive faculties. It is due to our powers of conception; and if our knowledge of chemical structure and



MR. J. J. FORSTER,
Lord Mayor of Newcastle-on-Tyne.
[*Photo by Jas. Bacon & Sons.*



PROFESSOR G. A. L. LEBOUR, D.Sc., F.G.S.,
Vice-Principal of Armstrong College.
[*Photo by Jas. Bacon & Sons.*



SIR ISAMBARD OWEN, M.D., F.R.C.P.,
Principal of Armstrong College.
[*Photo by Jas. Bacon & Sons.*

physical phenomena has advanced with startling rapidity, it is because the physicist of to-day sees more clearly in his mind's eye the great picture of the inorganic world of which space is the frame, time the canvas, and the electron the stuff which fills the canvas and makes the picture. This great picture which the physicist sees is none other than a picture of Nature. What Nature really is we know not, and may never know. But it is something—nay, more, it is a great thing—for us to see with trained eyes even a corner of the great picture which depicts to us how man views the earth and what man thinks of its contents; which depicts to us the experience which man has undergone during all the days and during all the years of his sojourn and of his labour on the earth.

Tuesday's Session.

The day began with bright sunshine, but a sharp shower of rain fell during the morning. By half-past nine the members of the Conference began to assemble at the Armstrong College. The sessions were held in the Physical Laboratory, which is advantageously arranged for an audience, the seats being tier-wise. The acoustic properties of the room are excellent. Behind the lecture bench were ranged the President (Mr. J. F. Tocher), and on his right sat Mr. E. S. Peck and Mr. E. White (the Secretaries), Dr. Symes (Liverpool), Sir Edward Evans, Mr. Thos. Tyrer, Mr. J. Smith (Dublin), and Mr. G. Weddell and Mr. T. M. Clague (Chairman and Secretary of the Local Executive). On the right were Mr. N. H. Martin, Mr. W. A. H. Naylor, Mr. D. Lloyd Howard, and Mr. F. H. Alcock. The theatre was comfortably filled, the ladies being present in good force.

The proceedings began at about 9.45, when Mr. G. Weddell delivered

An Eloquent Speech of Welcome.

He said: Ladies and Gentlemen,—Some weeks ago an eminent statesman was receiving a conference of Press representatives from all parts of King Edward's dominions at home and from across the seas, and he gave them a



Mr. George Weddell,
Chairman of the Local Committee.
[*Photo by J. Bacon & Sons.*

welcome. He gave them a greeting in very few but significant words which thrilled the hearts of those sons of the Empire, and also thrilled the hearts of the millions who read them in the newspapers. On that occasion Lord Rosebery's greeting to these men was: "Welcome home." ("Hear, hear," and applause.) Ladies and gentlemen of the British Pharmaceutical Conference, in the name of the pharmacists of Newcastle-on-Tyne, Sunderland, and the surrounding district I give you a warm welcome home—(hear, hear)—a welcome to the home where some forty-six years ago your institution first saw the light. (Renewed applause.) At that first meeting of the Pharmaceutical Conference held at Newcastle there were present three pharmacists whose names were mentioned by the Lord Mayor—Brady, Mawson, and Proctor. They were all public-spirited men, devoted to their calling, but also with a larger spirit than that which belonged to their calling merely—and I think no one can be great in pharmacy without being greater than pharmacy. (Loud applause.) It is a calling that means strenuous attention to detail, but it is also a calling which requires a large amount of scientific knowledge, which, I am sorry to say, does not always find its fullest fulfilments in the calling itself. For that reason pharmacists are always that and something more. Brady was a scientific man in the highest sense of the word. Mawson was a strong, public-spirited man who died in the execution of his duty while Sheriff of Newcastle. Proctor was a pharmacist, but his pharmacy was like Moses. It led the pharmacists for forty years travelling through the wilderness until they arrived in the promised land. (Laughter.) To-day these three names are still pre-eminent in Newcastle. The firms which these founders of the Conference established are carried on by their immediate successors. The name of Brady & Martin is represented by our well-known friend and distinguished pharmacist, Mr. N. H. Martin. Personally I have the honour to represent the firm founded by Mr. John Mawson in the firm of Mawson, Swan & Weddell. The mantle of Elijah has fallen on Elisha in so far that the mantle of Proctor has fallen on the shoulder of Mr. T. M. Clague, of the firm of Proctor, Son & Clague—(applause)—our genial, strenuous Secretary, whose value I have learned to appreciate a thousand times more than ever I did during the past two years. The fact that these three names—Brady, Mawson, and Proctor—still exist to-day, and occupy some prominence in Newcastle-on-Tyne, is an evidence of purely personal worth. But it also shows that this is not enough to secure prominence that is permanent in its character. Breadth of view is among the things that prevail. The man who seeks his own, and nothing more than his own, who pays no attention to the public spirit of the profession to which he belongs, is bound to become smaller in mind and, in course of time, to be forgotten. In welcoming this Conference, I should just like to speak a word or two to some of our local members who may not attend these Conferences. I confess that I have not been a regular attendant at them, but I am certain that attendance at these gatherings tends to cultivate a keener interest in public life and a broader mind among those who follow our calling. ("Hear, hear," and applause.) I would therefore urge upon the local pharmacists to join the Conference, not only in courtesy to our guests, but out of the pleasure which their visit affords us. By so doing they will enlarge the scope of its work, increase its usefulness, and help to increase its permanence. Mr. President, it would be invidious for me to mention many of the distinguished pharmacists who have been associated with this Conference, but following up what I have already said about what ought to be the very essence of pharmacy, we can see representatives of two or three generations of men who have been eminent in our calling. I may mention two, not as the only ones, but as representing many more. Mr. W. H. Martindale represents the traditions of pharmacy, and has done so for a long time. Mr. Howard represents fine chemicals, and his firm has been associated with them for 150 years or more. Mr. Proctor's firm has been in existence for 150 years—I think I am correct, Mr. Clague. (Mr. Clague: "Longer than that.") When I speak of these men I indicate the permanence and eminence which comes of broad-mindedness. I have pleasure in welcoming you home. (Applause.) I assure you that it is with a very warm heart that I do so in the name, not only of the pharmacists of Newcastle, but of the pharmacists for fifty miles around our city. We hope that your stay will be enjoyable and that your deliberations will be fruitful. (Applause.)

The President: Ladies and Gentlemen,—Permit me in one word to thank Mr. Weddell for the exceedingly cordial welcome he has given us on behalf of the local committee. I am sure the members of the local committee have been working hard and are working hard to make this Conference a success, just as it was in the beginning and as it was twenty years ago. And, ladies and gentlemen, there is every reason why this Conference at Newcastle should be a great success. In the first place we have in Mr. Weddell

the able and purposeful and genial chairman of the local association. (Applause.) We have in Mr. Clague the man I have to obey—the resourceful and twice local Secretary of the Conference. (Applause.) Besides we have in Newcastle a group of pharmacists who have no superiors in skill, or in attainments, or in success. I have only to mention Mr. N. H. Martin, who is the very Nestor of pharmacists in Newcastle, and whose firm represents all that is best in pharmacy to confirm the statement. In Newcastle we have many industries connected with pharmacy, and we have our interest greatly awakened when we visit it. We can imagine Sir Humphry Davy's experiments in the discovery of the metal sodium, and what would have been his delight to have found sodium on the banks of the Tyne to-day, not in grains, or ounces, or pounds, but in tons. The city of Newcastle, again, is associated with the shipbuilding industry, with coal mines, and with wide agricultural activities. These points go to prove that our Conference is this year being held in the centre of a very purposeful community. I have to thank in one word Mr. Weddell for the exceedingly kind welcome he has extended to us to-day. (Applause.)

The PRESIDENT then asked the Senior Secretary (Mr. E. S. Peck) to read the

Letters of Apology

which had been received. The first was the following very interesting letter from the veteran founder, Dr. John Attfield, "Ashlands," Watford.

MY DEAR MR. PECK,—I gladly comply with your invitation received this morning to write a founder's letter to the British Pharmaceutical Conference assembling shortly at the place of its birth. Forty-six years ago I worked with all my heart and strength to aid Richard Reynolds, Henry B. Brady, and Henry Deane in establishing the British Pharmaceutical Conference. My heart yearns to be at Newcastle-on-Tyne at the forthcoming meeting to receive the great pleasures my brother members would yield and to give what little help I might afford. But imprisoned by neuritis and insomnia my resulting mental and physical weaknesses absolutely confine me to my house and garden. I earnestly wish that this third gathering of the body in Newcastle may prove to the President, Mr. Tocher, and to every other officer and member to be an unqualified success. Did followers of pharmacy realise the great fundamental advantages attending membership of the Conference the lists of members would be larger and attendance at the annual meeting be greater.

Mr. N. H. MARTIN suggested that a telegram should be sent to Dr. Attfield, and the suggestion was received with applause. Mr. Clague sent off the following:

The Pharmaceutical Conference in open meeting heard your letter with great pleasure and sends you, one of its two surviving founders, hearty congratulations, and hopes for your better and greater happiness.

Thanks to the President.

At five minutes to ten the President began to read the abstract of his address and concluded just before eleven (see p. 201). At its conclusion,

Mr. N. H. MARTIN rose to propose a hearty vote of thanks to the President for his very able address. He said that, owing to other engagements, that might be the only opportunity he might have of speaking at that Conference. He therefore asked their indulgence while he made a few general remarks unconnected with the proposition he had submitted. In the first place, to be personal, he desired to say that although he could not claim to be the founder of the Pharmaceutical Conference, he commenced his pharmaceutical career in the year when the Conference was founded—in 1863—and he had the privilege in 1868 to become an assistant to the first President, Mr. Henry Deane. And it was due to his teaching during the next five years—it was due to his example—if he had attained any of the success to which the President had referred. It was Henry Deane's example that was the source of all the progress he had made. The home-coming of the Conference to Newcastle was not without its sorrowful side when they thought of the members who had passed away. Mr. Brady, Mr. Mawson, and Mr. Proctor have gone, but, in addition, the Conference has suffered other serious losses. When last the Conference was held in Newcastle sixteen members had passed the President's chair. Of these twelve were alive and five attended the Conference—Brady, Groves, Reynolds, Shaw, and Abraham. They were there, and those who attended with them formed a galaxy of names of which every pharmacist was proud. That day twenty-nine pharmacists had passed the President's chair, and of these only twelve were alive. Among them were that veteran pharmacist Mr. Atkins, of Salisbury, and Mr. Umney, the cause of whose absence they deplored. When Mr. Umney was President he took as the text of his address the fact that the fundamental principle of the Conference was to maintain uncompromisingly the purity of drugs. The simplicity of the constitution and of the rules showed the wisdom of those who made them, and if he had to frame them that day he would only add one word and make them read "to maintain uncompromisingly the purity and the activity of drugs." In that relation he thought it interesting to note that the principle had been repeatedly brought before the Conference, and was enshrined in papers of the highest value that had been read. More recently the Conference was favoured at Brighton with a paper on purity and activity, and that day would be privileged to listen to one which would bring to their aid the most recent investigations in science. The data for that paper had been worked out in the pharmacy which Henry Brady founded. (Applause.) It was a pleasant reflection, and of interest to the Conference, that when it held its first meeting at Bath there were one hundred members. At its silver wedding, celebrated at Bath, its membership was 2,000. He would like the members of the Conference present, and those whose names appeared in the "Year-book," to see to it that as the Jubilee of the Conference was fast approaching—it would be celebrated in 1913—the membership, which had decreased, was raised to what it was at the time of the silver wedding. (Applause.) It could easily be done if only every member would make it his duty to add one more name to the present list. He had no idea where the Conference would be held in the year of its Jubilee, nor who would then be President, but he would indeed be a happy President if the membership of the Conference could be raised to 2,000. Coming on to deal with the President's address, Mr. Martin said that it had knocked down one of his cherished beliefs. He thought, from his recent experience, that as soon as a man got over the feeling—the natural feeling—of elation on being elected President of such an organisation as theirs, he was obsessed with the idea that he had a presidential address to prepare, and that in order to do so he had to spend sleepless nights, with a wet towel round his head, in thinking out something new to say—something entirely different from what had been said by his predecessors for some twenty or thirty years previous. (Laughter.) That thought could never have occurred to the President, for the speech he had delivered was stored with material for six addresses. (Applause.) Most of them should have been able to prepare an address out of a very small section of it. It was not proper or allowable to criticise the President's address, in so far as it was not a paper that could be criticised. The President was, for the time being, the very Pope of pharmacy. (Laughter.) He had to congratulate him upon the skill and ability with which he had essayed to deal with most of the difficulties in modern pharmacy. (Applause.) At the same time he might allude to the broad-minded and able way in which the President had referred to the Pharmacy and Poisons Act of 1908. Every word in the address which referred to that measure ought to be read by every pharmacist, every county and borough



MR. N. H. MARTIN.

council, by the members of the Privy Council, but more particularly by the heads of the Agricultural Department—(applause)—who were responsible for the poisons clauses. Still more the President's address should be read by the Licensing Committees. (Applause.) If they sat down and considered it carefully, they would be very, very careful how they administered the poisons section, and would be careful not to grant licences indiscriminately for the sale of poisonous compounds. (Renewed applause.) He congratulated the President on the way he had dealt with that subject. Touching on the educational phase of pharmacy, Mr. Martin remarked that he had been thinking over the present condition of pharmacy in view of the educational attainments of those who had been qualified by law to practise it. He held the view that it was absolutely impossible to ascertain a man's qualifications merely by examination; it was impossible by mere examination to know to what extent a man was trained for the profession. Henry Brady was one of the founders of the institution where we are now meeting. Here every facility was afforded those who so desire to improve their education. It was founded twenty years ago, and provides classes in chemistry, botany, materia medica, and kindred subjects, but there were no students. Concluding, Mr. Martin said he was not in a position to reveal where the next Conference would be held, or to state who the next President would be, but in the name of those who were present, on behalf of members who were absent, and on behalf of pharmacy generally, he had to move that thanks be given to the President for his interesting address. (Applause.)

Mr. John Smith, President of the Pharmaceutical Society of Ireland, in seconding, expressed the pleasure he experienced, as one of the representatives of the pharmaceutical chemists of Ireland, in supporting the motion of thanks to the President of the British Pharmaceutical Conference. Irish pharmacists did not appear at these meetings in such numbers as they ought to, and on that occasion they found Newcastle a difficult place to get to. At the same time he assured the meeting that the pharmacists of Ireland took a deep interest in the work of the Pharmaceutical Conference. He was safe in saying that they would read the address which had been delivered from the chair that day with the greatest interest and, he was sure, with great profit. Many able addresses had been delivered to the Pharmaceutical Conference by able men who had preceded the President in the chair, but on that occasion they had been treated to what Mr. Martin had been pleased to describe as an address which contained material for half-a-dozen addresses. The manner in which Mr. Tocher had referred to the various subjects afforded them food for reflection. He was particularly pleased to hear the remarks he made in regard to paying pharmacy and also to the question of apprenticeship. These two subjects, he need hardly say, had been very much before them of late in Ireland—more particularly the latter. They maintained that examinations were not enough, and that it was necessary that apprentices should be really apprentices, not only in name, but also in fact. It was not right that the Pharmaceutical Society should be called upon to accept a certificate of apprenticeship. For that reason he felt sure that they were all gratified that they were supported in their view by the President, whose address strengthened them in their endeavours to have the individual associated with the question of apprenticeship. (Applause.) The subject was not one to create enthusiasm, although, if the opportunity were favourable, he should like to refer to a number of points connected with it. Concluding, Mr. Smith expressed his gratification that Mr. Tocher should have had the hall-mark of pharmacy bestowed upon him.



Mr. John Smith.

Mr. Martin then put the motion to the meeting, and declared it carried with acclamation.

The President briefly acknowledged the vote of thanks.

At this stage the ladies withdrew, and were conducted to the Royal Victoria Infirmary, close at hand, by the Ladies' Committee.

The President then called on Mr. E. S. Peck to read the

Annual Report.

The Executive Committee met on five occasions. Grants were made to Mr. H. Finnemore for a research upon "Cimicifuga Racemosa," and to Mr. E. W. Pollard for work on "Commercial Emulsions," and the results are being communicated to the Conference. There is still a considerable balance to the credit of the Research Fund, and applications for grants or suggestions for problems to be worked out will be welcomed. The sub-committee appointed in September to consider what steps should be taken to improve the numerical and financial position of the Conference reported that it was considered advisable that the delegates appointed by the various local Associations to attend the Conference should be officially presented to the President, and thereafter invited to participate in a discussion upon topics not necessarily scientific, but of interest to pharmacists generally. Two such discussions arranged for this year are (*a*) "Shall Dispensing be Confined to Pharmacists?" and (*b*) "Some Problems of the Poison Schedule." This committee also suggested that steps should be taken to reduce the cost of the "Year-book" by making shorter abstracts of those papers which are of easy access, and that the financial year should run from January 1 to December 31. The business of the Conference was also rearranged so as to give members longer time in which to discuss the papers. Mr. Edmund White, who has been mainly responsible for the publication of the "Year-book" for the past six years, informed the committee that he wishes to relinquish his office as one of the Hon. General Secretaries. The Executive recorded their thanks for the services rendered to the Conference during his term of office. Reference was then made, among other matters, to the services of the Editor (Mr. J. O. Braithwaite) and the Assistant Secretary (Mr. J. Hearn). The committee reported that there has been no falling-off in the membership during the past twelve months, and appealed to the members to assist in increasing the usefulness of the Conference.

Mr. J. P. Kay (Aberdeen) moved the adoption of the report, and this was seconded by Mr. C. E. Stuart (Newcastle) and carried *nem. con.*

Financial Statement.

Mr. Edmund White next presented the financial statement on behalf of the Treasurer (Mr. J. C. Umney). Members' subscriptions amounted to 338*l.* 0*s.* 6*d.*; sales of "Year-book," 20*l.* 16*s.* 8*d.*; advertisements, 75*l.* 0*s.* 7*d.* The expenses during the year included: "Year-book," 222*l.* 17*s.* 2*d.*; editor's salary, 75*l.*; postages, 12*l.* 16*s.* 7*d.*; rent of office, 10*l.*; Assistant Secretary's salary and expenses at annual meeting, 55*l.* The balance in hand is 5*l.* 14*s.* 3*d.* The Bell & Hill's Fund showed a balance of 21*l.* 13*s.* 2*d.*, and the Research Fund 25*l.* 2*s.*

Mr. White explained that the position of the Conference is more satisfactory, more had been received from subscriptions, and the cost of the "Year-book" had been reduced by 10*l.* He referred also to the change in the incidence of the financial year which would facilitate the collection of subscriptions. The Conference are anxious to receive applications for grants from the Research Fund.

Mr. Rutherford Hill moved the adoption of the report, and held that it is not desirable that the Conference should possess a large balance at the end of the year. As long as the Conference pays its way the members should be satisfied. He was glad to note a reduction in the cost of producing the "Year-book," but hoped that economy would not be carried too far and lead to a diminution of the value of the "Year-book" as a handbook of pharmacy. Mr. Hill also reminded the members that, although 7*s.* 6*d.* is the minimum subscription, there is no limit on the other side, and it is just as easy to obtain a 10*s.* postal order. More money would enable the Conference to carry on its work with greater efficiency.

Mr. W. Giles (Aberdeen) seconded, and the report was adopted.

THE PAPERS.

The PRESIDENT then called upon the author to read the following paper :

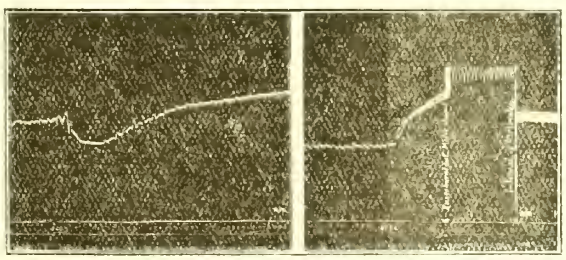
Experiences in the Testing of Drugs by Bio-chemical Methods, with Special Reference to Digitalis, Squill, and Strophanthus.

By WILLIAM MARTIN, M.A., M.D., Durham.

IN this communication the author recorded some of the results obtained from personal experience in testing preparations during the past ten years in the ordinary business of a manufacturing pharmaceutical house. He recalled the communication to the Conference in 1905 by Professor W. E. Dixon, and with reference thereto said it is desirable to draw a fairly sharp distinction between methods of testing suitable for a manufacturer's laboratory and elaborate pharmacological studies more appropriate to a medical school. The present communication only refers to points necessary to establish a reasonable proof of activity. In speaking of standardisation in this connection no claim is made to definiteness attainable by chemical means, since the factors involved in bio-chemical methods are too variable to obtain such results.

Cannabis Indica is tested by oral administration to dogs. Five grains of the extract is given in divided doses of three and two grains respectively, the second dose after a lapse of two hours. The onset and duration of the inco-ordination of movement and other characteristic symptoms, which develop in accordance with the activity of the drug, are noted. An intelligent animal with fairly long legs, such as a fox terrier or an Irish terrier, is suitable for the experiment. The effect of similar doses is not strictly uniform even in the same animal, but the active preparation produces without fail symptoms peculiar to the drug. A small consignment of extract of cannabis indica was delivered recently which contained about 34 per cent. of residue insoluble in 90-per-cent. alcohol, and this extract failed to meet the usual physiological requirements. In every extract with an insoluble residue not exceeding 2 per cent. the author has been able to elicit characteristic effects. He agreed with Professor Marshall's conclusion that the chief cause of deterioration of Indian hemp extract is oxidation of the active principle, and consequently that storage in hermetically sealed vessels would secure greater uniformity ("P.J.," 1909, I., p. 418).

Ergot appears to have baffled pharmacologist and chemist alike almost more than any other drug of first-class importance. The two kymograph tracings shown were obtained with preparations made from the same consignment of crude ergot such as would be passed for use by any careful pharmacist. The author does not consider that the pharmacopœial fluid extract of ergot prepared from good sound ergot is necessarily inert clinically because it fails to give a rise of blood-pressure in certain animals. It is agreed generally that good results are obtained with this, the most commonly used official preparation. Pharmacologists tell us that the rise in blood-pressure following

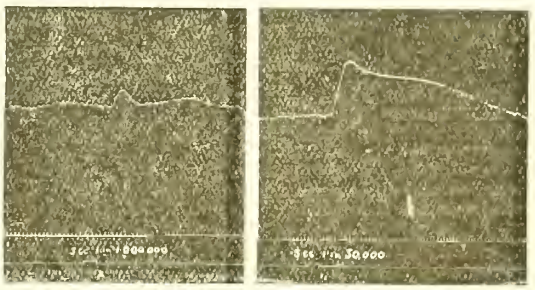


1 2

KYMOGRAPHS OF ERGOT.

upon the introduction of ergot into the circulatory system is a true index of the effect that would be produced on the parturient uterus. Laboratory experiments, however, almost invariably show a fall of blood-pressure, with a gradual return to the normal, or a rise above it, when a small quantity of diluted liquid extract of ergot is introduced direct into a vein. The first tracing illustrates these phenomena. The fall is doubtless due to the presence of depressor elements. The second tracing is that following the intravenous injection of an experimental preparation in which an attempt was made to eliminate the deleterious elements. There is no fall recorded, but an immediate prolonged and striking rise. The tracings were obtained from two dogs treated on precisely parallel lines. The differences in activity are sufficient to justify the belief that a great improvement could be made in the official preparations of ergot.

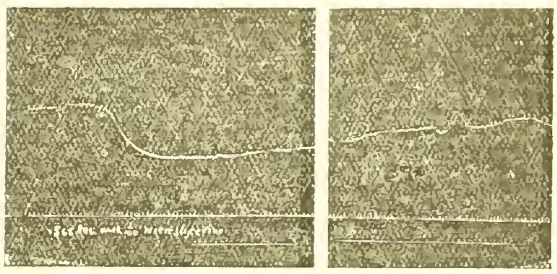
Epinephrin.—The vaso-constrictor principle of the suprarenal capsules does not give quantitative results of much value as regards activity by ordinary chemical methods, while even qualitative tests are not nearly so delicate as observations of its effect upon the blood-pressure. Gunn and Harrison's ingenious identification test, in which the odour of phosphoretted hydrogen is developed, may prove useful to chemists in examining solutions, its presence being confirmed with colour-reactions. The green colour given by a solution of the principle with ferric-chloride solution and the rose pink with solution of iodine are well developed in dilutions of 1 in 500,000, and are seen even in dilutions of one in a million, the rose-pink being very persistent. The method of physiologically standardising suprarenal preparations adopted by the author in 1906 is that of Dr. Isabella Cameron ("Proc. R.S. Edin.," vol. xxvi., Part 3), with slight modifications. Fig. 3 shows the immediate slight but quickly evanescent rise in blood-pressure following upon the injection of 0.0005 mgm. of epinephrin (0.5 c.c. of 1-in-1.000.000 solution). The introduction of 0.01 mgm. of epinephrin (0.5 c.c. of 1-in-50.000 solution), which is then made, causes the blood-pressure to rise abruptly and be maintained at a high level for some seconds, with a gradual



3 4

KYMOGRAPHS OF EPINEPHRIN.

subsidence (fig. 4). When the pressure is again at a constant level 0.65 mgm. of nitroglycerin in solution is thrown into the vein. The effect is shown in fig. 5, where the fall of blood-pressure due to the dilation of the vessels is approximately equal to the previous rise. When the blood-pressure again runs an even course injections are made of the two antagonistic elements in the above corresponding doses to produce equal and opposite effects, which practically balance one another. The epinephrin appears to act a little ahead of the nitroglycerin, but this effect is not shown in fig. 6. An epinephrin which passes the tests can be relied upon absolutely.

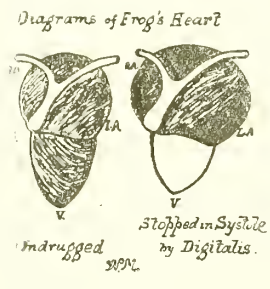


5 6

KYMOGRAPHS OF EPINEPHRIN.

Cardiac Tonics.—Great variation exists in the therapeutic value of the commercial preparations of cardiac tonics (especially digitalis, but perhaps excepting strophanthus),

which fact seems as undeniable as it is disquieting. Biochemical tests give the truest indication of any, but candid records of each worker's method of procedure and results are needed for developing a final expression of opinion. The most suitable method is that which requires a fatal termination to follow the administration to a frog of a fixed dose of the preparation tested within a certain time-limit. The animals chosen should be as far as possible of uniform vigour, weight, and species, preferably males, especially in the spawning season, when even the males should be segregated. The most favourable time for testing with frogs is June to September, before the hibernation period. A series of five common frogs of apparently equal vigour are selected (15 and 25 grams weight), with as little difference as possible in weight, which is marked on a small tablet tied loosely to one of the frog's hind legs. They are placed in a glass receptacle about 10 in. deep, or one with a loosely fitting cover, a little water being put at the bottom of each vessel. The preparation to be tested is carefully diluted in a fixed proportion, and the standard dose per 20 grams of frog is calculated for each animal. The accurately graduated hypodermic syringe is fitted with a very fine needle—a most important point. A microscope with a $\frac{2}{3}$ objective is used for observation. The appropriate dose is made into the dorsal lymph sac, avoiding return of fluid through the puncture in the skin. The injections are made serially and the time noted in each case. Shortly afterwards some of the animals droop their heads, while their legs are splayed out unsymmetrically. When one fails to respond to any external stimulus the web of the foot is then examined with the microscope to see if circulation has stopped. On the movement of the blood in the larger vessels ceasing, the animal is considered dead, and the heart carefully exposed. If the "end-reaction" has been typical, the ventricle will be found firmly contracted, white, and motionless (an essential feature of the test); but the auricles will be purple, engorged, and generally also motionless, but a few feeble and intermittent beats may continue for a short while (see diagram). The time is now again noted down. Probably all the animals will be dead within two hours. This procedure applies to the whole of the preparations in the group, but further remarks refer only to tinctures. The following are the approximate dose standards for pharmacopœial tinctures, with 20-gram frogs, obtained by various workers :



Edmunds and Cushney: Digitalis—A dose between 4 and $1\frac{5}{6}$ min. (0.24 and 0.08 c.c.) should kill a frog between 15 and 20 grams in 1 hour.

Dixon: Digitalis—$2\frac{1}{2}$ min. (0.15 c.c.) should kill in 1 hour. Squill—the same, but strophanthus always more toxic.

Dixon and Haynes: Digitalis—$2\frac{1}{2}$ min. (0.15 c.c.) kills in 66 minutes. Squill—$2\frac{1}{2}$ min. (0.15 c.c.) kills in 100 minutes. Strophanthus—$\frac{1}{10}$ min. (0.018 c.c.) kills in 48 minutes.

Haynes: Confirms Dixon and Haynes, but extends time-limit to 5 hours.

Houghton, confirming his work of much earlier date: Digitalis—4 min. (0.24 c.c.) should kill within 12 hours. Squill—2 min. (0.12 c.c.) should kill within 12 hours. Strophanthus—$\frac{1}{10}$ min. (0.006 c.c.) should kill within 12 hours.

Professor Dixon when working in conjunction with Dr. Haynes raised his time-limit, while Dr. Haynes, in confirming these standards, seems to have extended the time-limit to three hours. Dr. Houghton's method of procedure ("Lancet," June 19, 1909) varies from the others in many ways. The doses for digitalis and squill seem large for a time-limit of twelve hours, while the relative activity of strophanthus seems greater than has been accepted generally.

The "quick-kill" standard results used by the author are as follows :

For tinctures of digitalis and squill, $2\frac{1}{2}$ minims (0.15 c.c.) per 20 grams of weight is injected. Of the five frogs used in each test all must be markedly affected, and a majority must be killed in typical fashion within three hours. Any surviving should be pithed and the heart exposed.

For tincture of strophanthus $\frac{1}{2}$ min. (0.03 c.c.) per 20 grams of frog weight shall kill within two hours. The general comments above also apply.

The effect of seasonal variations of activity in animals is shown in the following table :

Seasonable Variations.

Tincture	Average Time to Kill in Minutes	
	April-September	October-March
Digitalis, B.P.	110	Many survivals
Scillæ, B.P.	102	173
Strophanthi, B.P.	74	182

For the October to March period reliance can be placed on the proved keeping power of the crude drug, or preferably a standard can be set up in August against which preparations can be tested in the winter months, disregarding the time-limit. The trial preparation is deemed active if it kills a similar series of frogs as quickly as the standard. The marked difference in the effect produced on individual animals by these drugs under conditions as closely identical as possible is illustrated in the next table :

Varying Times taken to kill Frogs of Approximately equal Weights injected at the same Time with the same Preparation in Standard Doses.

Tinct. Digitalis	Tinct. Scillæ	Tinct. Strophanthi
15.4 = 80	18 = 80	16.7 = 60
16 = 55	21 = 68	17 = 60
19 = 74	19.5 = 126	20 = 87
20 = 48	19.5 = 85	20 = 93
20.25 = 90	19 = 114	20 = 112
20.25 = 133	21 = 180	23 = 78
21 = 109	23 = 62	20.1 = 65
21 = 86	21.6 = 75	22.2 = 75
21 = 89	35 = 100	28 = 95
22.5 = 108	35 = 70	28 = 105

Weights in grams. Times in minutes.

The figures are a reasonable proof that the individual factor is a variable quantity sufficiently well marked to make it unwise to draw too precise conclusions from the assumption that there is a uniform reactivity for a given weight of animal, as also seen in the following results :

Table showing Results of injecting Frogs of Different Weights with Equal Doses.

Tinct. Scillæ, B.P. Standard $2\frac{1}{2}$ min. (0·15 c.c.) per 20 grams.			Tinct. Strophanthi, B.P. Standard $\frac{1}{2}$ min. (0·03 c.c.) per 20 grams.		
Weight in Grams	Dose of Tr. diluted 1 in 4	Time to Kill in Minutes	Weight in Grams	Dose of Tr. diluted 1 in 10	Time to Kill in Minutes
14	$7\frac{1}{2}$ min.	Survived	$16\frac{1}{2}$	$4\frac{3}{4}$ min.	80
$14\frac{1}{2}$	Do.	136	$17\frac{1}{2}$	Do.	88
$14\frac{3}{4}$	Do.	141	$17\frac{3}{4}$	Do.	88
$15\frac{1}{2}$	Do.	106	19	Do.	92
$16\frac{1}{2}$	Do.	83	19	Do.	92

In the squill series exactly the reverse of the rule took place, and the lightest frog actually survived. Regarding the keeping properties of these drugs and their tinctures, with digitalis there seems to be no doubt that carefully collected and dried leaves will retain their activity for many years when suitably stored. If special precautions are taken there seems to be no deterioration at all. Leaves collected in the autumn of 1907 gave with tinctures made in April 1908 an average kill in ninety-nine minutes, while the tincture made in June 1909 required on an average ninety minutes to kill. Dr. Gordon Sharp has recently stated that leaves eight years old retained their full activity, while the eleven-year-old drug still gave its typical reaction. It is quite safe to say that no appreciable loss of strength occurs in digitalis tincture up to nine months. The impression obtained by testing old samples of tincture of squill is that this preparation begins to lose its activity rather sooner

than tincture of digitalis, but retains some degree of potency for a much longer period. Tinctures of squill made in 1905-8 still show distinct evidence of activity, but preparations of digitalis over two years old are practically inert. Tincture of strophanthus, in striking contrast with the other cardiac tonics, retains its activity unimpaired for many years, as shown in the following table :

Tincture of Strophanthus.

Year Made	Average Kill	Year Re-tested	Average Kill
1906	60 minutes	1909	87 minutes
1907	108 ,,	1909	74 ,,
1908	54 ,,	1909	87 ,,
1909, May ...	102 ,,	1909, June	88 ,,

If the available pharmaceutical knowledge were always fully utilised less would be heard of inactive galenical preparations. While the time is not yet ripe for the introduction of bio-chemical tests into the Pharmacopœia unless they are made permissive and not mandatory, there ought, in the author's opinion, to be no insuperable difficulty in obtaining a modification of the existing law to make it possible for pharmacists to obtain licences to carry out biological tests under proper safeguards.

The paper occupied some time in delivery, and was illustrated by lantern-slides.

Discussion.

The PRESIDENT said the biological testing of drugs is interesting to pharmacists. The paper shows the necessity of studying the physiological action of drugs, but he was not quite prepared to advocate that physiological standards should be introduced into the Pharmacopœia. The British Pharmacopœia is not under the control of pharmacists, and it is quite within the rights of the General Medical Council to introduce such tests. He thought that the tests Dr. Martin had outlined are such that could be carried out by pharmacists. It does not require a profound study of the anatomy of the frog to carry out the tests.

Mr. PECK said he had been the means of bringing Dr. Dixon's paper on this subject before the Brighton Conference, and he had recently communicated with Dr. Haynes, of the Cambridge Pharmacological Laboratory, on the matter, from whom he had received the following comments :

It is now over four years since I commenced this work, and, having examined many preparations from several firms of manufacturing chemists, I am more than ever convinced of the necessity of some kind of physiological standardisation in case of those galenicals which cannot be assayed by chemical processes. I have come across specimens of extract of ergot and preparations of the suprarenal glands which have absolutely none of the usual effects when tested experimentally; and many samples of the tinctures of digitalis, squill, and strophanthus have been found to give reactions considerably below those conforming to our arbitrary standard. I am in complete agreement with Dr. Houghton in his plea for international standards (*C. & D.*, June 5, p. 879). We are sometimes told that our methods are crude and inexact, that the frogs should be themselves standardised, and that the action of drugs on the lower animals is in no way comparable to that on man. But surely we can say whether a certain preparation has any action at all, and can compare it approximately, if not exactly, with a standard preparation. I will now refer to a few points which I think may be of interest. In the case of Indian hemp we find that cats respond very nearly as well as dogs, and give the usual symptoms after the administration of an active preparation. African and American hemps are not nearly so toxic as the Indian variety. There is no doubt that the activity of a specimen of ergot can be well and justly estimated by observations of the effect on blood-pressure; this has been proved by control experiments on the isolated uterus, pregnant and unimpregnated, of cats and rabbits. The recent work of Drs. Dale and Barger in isolating and identifying the chief blood-pressure-raising active principles of ergot is extremely interesting and valuable, and throws much light on the notorious variations found in commercial liquid extract. In my experience it is impossible to tell whether a specimen of ergot is active or not by the naked eye, or from a knowledge of its place of growth, transport, etc. The only reliable method is to submit a sample from bulk to physiological experiment. It seems clear that the most active specimens come from Russia. With regard to the group of cardiac tonics, we estimate the activity of specimens by determining the least quantity which will cause the death of frogs of known weight by arresting the heart in systole within two hours. The result is expressed in minims or cubic centimetres per 100-gram frog. Thus our standard for a reliable tincture of digitalis or squill is that the minimum lethal dose for 100-gram frog is not more than 0.74 c.c., or 12½ minims. Tincture of strophanthus, as I have urged before, is very much more toxic than either the tincture of digitalis or squill, although the pharmacopœial dose is the same. Our standard is that the M.L.D. shall be not more than 0.06 c.c., or 1.47 minims, for 100-gram frog. The frogs should be freshly caught males, and as many as two dozen may be required for each specimen of tincture before the minimum lethal dose can be estimated. Our time-limit is two hours, for it is quite exceptional for a frog to succumb if he survives the injection for that period. Before injection the tinctures of digitalis or squill are diluted with an equal quantity of frogs' saline solution, while tincture of strophanthus is diluted one in twelve for greater exactitude of dosage. There is no reason why the leaves of the flowering plant, the second-year leaves of digitalis purpurea, should be specially mentioned as being the best: I have on several occasions found that the first-year leaves are quite as active, if not more so. The leaves retain their activity for many years, as pointed out by Dr. Sharp, if kept in well-sealed vessels. The tinctures are found to begin to deteriorate twelve months after preparation, and should not be dispensed after being that time in stock.

Dr. SYMES said that, judging by the uniform results which Dr. Martin had obtained, the tinctures obtainable from pharmacists are quite equal to the demands of the physician. In regard to making these tests official, he did not think that the stage has arrived for making the tests compulsory. Pharmacists would be liable to be hauled up before a magistrate for supplying a tincture which, perhaps, fell slightly below the standard in blood-pressure effect. He added that he hoped that pharmacists would some day have a real position in the preparation of the Pharmacopœia.

Mr. RUTHERFORD HILL said that some time ago he had special specimens made of ergot preparations which, on being tested by a physiologist, were condemned. This was by the blood-pressure test, but it was found that the action on uterine muscle was quite satisfactory. A paper by Dr. Goodall, in the "Edinburgh Medical Journal," had since shown that ergot contains pressor and depressor constituents not yet determined, and the proportion varies very much in different samples of ergot, even varying with slight alterations in the method of preparation. Dr. Goodall suggested that the uterine muscle-contraction test is the only trustworthy one. This conclusion seemed to show that there is room for further investigation before adopting the blood-pressure test. Mr. Hill added that Professor Trail had told him that the defect of the pharmaceutical examinations is that whereas botany is a subject of examination, zoology is not touched upon. If the scope of the examinations is to be widened, he suggested that it might be in that direction.

Mr. H. W. GADD asked whether Dr. Martin had found any relation between the proportion of strophanthin in tincture of strophanthus and the physiological tests. In two results to which he referred the lethal dose for a frog seemed to be in exact proportion to the quantity of strophanthin present.

Mr. N. H. MARTIN did not agree with Dr. Haynes that Russian ergot is so much superior. He (Mr. Martin) finds that Spanish ergot is exceedingly active. If pharmacists are careful to select bold, sound, and new ergot, a preparation will result which will be clinically active.

Mr. E. BRIER briefly referred to the necessity of international standards for digitalis, strophanthus, and squill as advocated recently by Dr. Houghton in his paper before the International Congress of Applied Chemistry.

Dr. MARTIN said he only suggested the inclusion of bio-chemical tests in the Pharmacopœia for the digitalis group. It would be quite impossible for pharmacists to carry out tests on the uterine muscle. The frog tests referred to in his paper can be carried out perfectly well. He had not worked on the lines suggested by Mr. Gadd, as his experiments were conducted on the tinctures made by the Pharmacopœia method. Dr. Martin added that the B.P. tincture of strophanthus is a remarkably constant preparation.

On the motion of the President a vote of thanks was passed to Dr. Martin.

The next paper was :

Estimation of Extractive and Glycerin in Spirituous Galenicals.

By W. A. H. Naylor, F.I.C., and E. J. Chappell.

The authors published a process for the determination of glycerin in spirituous galenicals earlier in the year (*C. & D.*, 1909, I., p. 268), and their attention has been directed latterly to the estimation of extractive in similar preparations. The only suggestion of value added by a careful search through chemical literature is that by Harvey (*C. & D.*, 1904, I., p. 178) of repeatedly moistening the extractive from compound tincture of rhubarb to facilitate the subsequent drying. The methods of inquiry which suggested themselves were :

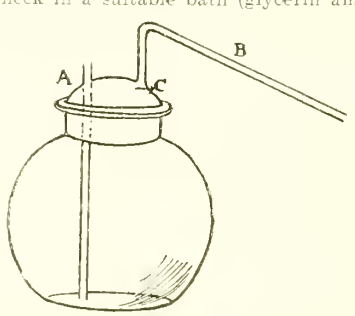
A. Conversion of the glycerin into a non-volatile compound of known weight and constant composition.

B. Removal of the glycerin, and determination of extractive by weighing the residue.

In the earlier experiments, based upon process A, lead oxide was added to the galenical, which had been reduced to low bulk (to remove volatile acids), and the mixture dried to constant weight. The results were not sufficiently satisfactory, owing to the difficulty of completely drying the lead-oxide mixture, and the method was abandoned.

After experiments regarding process B, distillation, as conducted by Bordas and de Raczkowski ("Comptes Rend.," 1897, 124, 240-242), was given preference and modified to prevent loss of extractive by splashing. After considerable search, a loss of glycerin which constantly occurred was traced to its condensation on the rubber stopper, and this non-conducting material was replaced by a hollow glass stopper. The method adopted is as follows :

The illustration shows the distillation-flask, which is a modification of Glassgen's flask for determining water in cement. Two tubes are fused in the hollow glass stopper. The tube A, which projects a little above the neck, reaches to the bottom of the flask while the bent tube B is cut off at level with the inside of the stopper. The flask is immersed up to the neck in a suitable bath (glycerin answers well).



and one end of a coil of compo. tubing, which is also submerged in the bath, is connected to A by means of pressure-tubing (to which a screw-clip is attached) exposing as little of the tubing as possible. Tube B is joined to two Woulff's bottles (containing ½ to 1 in. of water above ends of the delivery tubes) by means of short lengths of pressure-tubing, while the last bottle is in turn connected to a water-pump and manometer.

For an estimation, 5 c.c. (or other suitable quantity—*e.g.*, for tr. chlorof. et morphinæ co., 2 c.c.) of the galenical is introduced into the weighed flask, which is then placed in the bath and connection completed, the clip being closed. After reducing the pressure to 18-20 cm. of mercury a slow current of washed air is allowed to pass through the apparatus by carefully opening the clip. Meanwhile the temperature of the bath is raised to 130°-140° C. After the alcohol and water have passed over—indicated by tube B cooling—the open end of the compo. coil is connected to a steam-generator and steam admitted very gently so as to avoid splashing. The current is gradually increased to a fairly rapid rate, which should be continued for three hours at a pressure of 18-20 cm. Washed air is then carefully admitted until atmospheric pressure is attained, and the apparatus is disconnected. The stopper and tube B are then washed with distilled water and the washings added to the distillates and, after concentration to 5-10 c.c., filtered through paper, washing the basin and residues to produce a definite volume. The glycerin in the total filtrate, or in an aliquot part, is titrated according to Hehner's bichromate method as modified by Richardson and Jaffé ("Journ. Soc. Chem. Ind.," 1898, p. 330), omitting the treatment with lead subacetate, etc. Any extractive adhering to the lower end of tube A is removed by washing with a suitable solvent and added to the contents of the flask, which is then dried at 110° C. and weighed.

The following results were obtained by adding a known weight of assayed glycerin to the concentrated tincture, with a known amount of extractive, and making the product to a definite volume with alcohol of the proper strength. Any deposit was uniformly diffused before withdrawing a portion for analysis :

Tinctura			Extractive p.c.		Glycerin p.c.	
			Present	Found	Present	Found
Aurantii	...	...	2.04	1.73 1.82	17.97	17.17
Belladonnæ	...	...	0.55	0.51 0.47	19.08	18.40 18.51
Calumbæ	...	...	1.11	0.99 0.99	23.25	23.30
Camphoræ co.		...	0.31	0.29	3.62	3.72
Cardamomi co.		...	6.16	6.46	8.44	8.24
Cascarillæ	...	...	2.90	2.51	4.21	4.25
*Chlorof. et morph. co.	...	A	—	1.03	31.50	30.97
,, ,,	,,	B	1.28	0.93	31.50	30.87
Digitalis	...	...	3.67	3.46	7.59	7.67
Hyoscyami	...	...	2.86	2.72	7.53	7.28
Myrrhæ	...	...	5.46	5.31	6.45	6.25 6.14
Nucis Vom.	...	...	2.33	2.35	2.22	1.93
Opii	...	...	3.45	3.37	5.12	5.01
Podophylli	...	...	3.51	3.22	6.99	6.59
*Rhei co.	...	A	3.61	2.86	12.6	12.09
,,	...	B	3.61	2.76 2.69	12.6	12.42 12.94
,,	...	C	3.70	3.27	12.6	12.17
Senegæ	...	...	7.99	8.05	8.70	8.02

* Official tinctures.

An examination of commercial tinctures showed 0.97 to 1.05 per cent. of extractive and 27.12 to 28.54 per cent. of glycerin in four samples of tr. chloroformi et morphinæ co., and 3.12 to 3.41 per cent. of extractive and 11.61 to 12.71 per cent. of glycerin in three samples of tr. rhei co.

The marked deficiency in extractive shown in the above table may be justifiably assumed to be volatile substances. The residue in the basin and on the filter, from filtering the concentrated distillate from sample B of tr. chloroformi co. morphinæ co., yielded to hot alcohol 0.20 per cent. of dry extractive calculated upon the original tincture. The distillate from tr. rhei co. contains a water-soluble yellow substance, and a small amount of water-insoluble matter. Sample C yielded 0.05 of the latter to 60-per-cent. alcohol.

Discussion.

The President said the method outlined by Mr. Naylor seemed very simple, and he congratulated Mr. Naylor and Mr. Chappell on having solved a problem which has been on the research-list for some years. He experimented on the subject some time ago, but had to abandon as unsatisfactory the processes he tried.

The next paper was :

The Constituents of the Rhizome of Cimicifuga Racemosa.

By Horace Finnemore, B.Sc., Ph.C., etc.

An alcoholic extract of this rhizome was treated with the following solvents : Water, light petroleum ether, chloroform, ethyl acetate and alcohol. The aqueous solution contained a small quantity of isoferulic (hesperetic) acid, 4-hydroxy-3-methoxy cinnamic acid (m.p. 228° C.), which was identified by its conversion into its acetyl derivative, by reduction with sodium amalgam to hydro-isoferulic acid, by titration, and by estimation of its methoxyl content. In addition, a small amount of sugar, tannin, and a crystalline substance (m.p. 153° C.) were

present. The petroleum-ether solution yielded a phytosterol, palmitic acid, and liquid fatty acids containing oleic and other unsaturated acids. From the ethereal solution were obtained a colourless crystalline substance, and two further crystalline substances were isolated from the chloroformic solution. The drug contains a trace of an alkaloidal body. Mr. Finnemore briefly reviewed previous work on this subject. The most serious research was by Trimble, but no very definite results were obtained. By means of the blackboard Mr. Finnemore gave a very interesting account of his research, showing the construction of the isoferulic-acid molecule. He handed round specimens of the unnamed crystalline bodies which he has obtained. The specimen of "racemosin" in the museum of the Pharmaceutical Society has been examined and found to correspond with the chloroform extract obtained by the author.

DISCUSSION.

The PRESIDENT said this was one of the most brilliant chemical researches ever submitted to the Conference. (Hear, hear.) Up till now the chemistry of *Cimicifuga racemosa* has been comprised in the terms "cimicifugin" and "racemosin." (Laughter.)

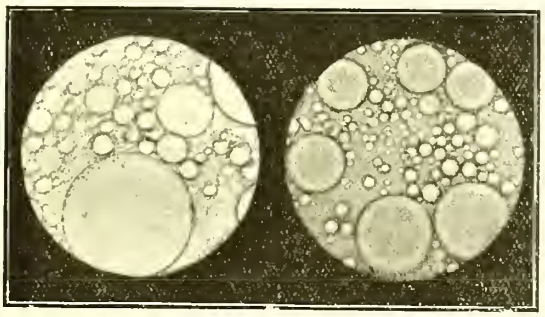
Mr. FINNEMORE, replying to the vote of thanks, said that the paper was not really completed, but he hoped to have it ready for inclusion in the "Year-book."

Then was taken the paper

Commercial Emulsions.

By E. W. POLLARD, B.Sc., Ph.C.

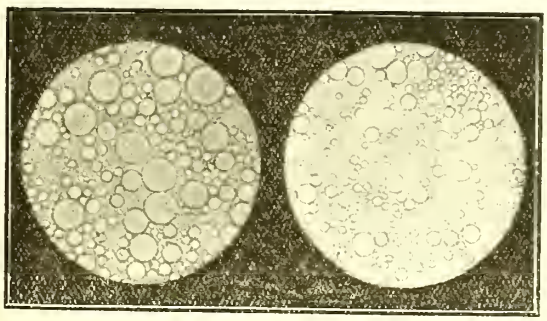
THE first part of the paper dealt with the choice of analytical methods, the following being the method evolved



A B

A, Emulsion from wholesale house: 40.4 per cent. cod-liver oil. B, Thin, contained 31.5 per cent. of liquid petroleum.

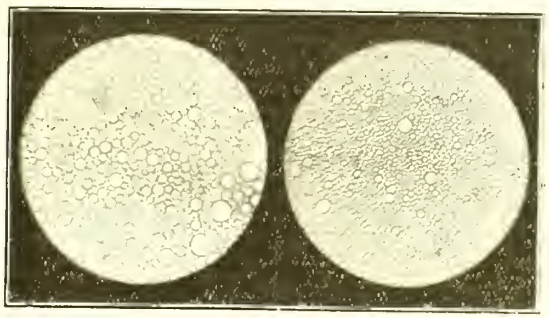
for the assay of the percentage of oil in the samples of emulsion.



C D

C, Thick; contained 43.9 per cent. liquid petroleum. D. Semi-fluid; contained 41.5 per cent. cod-liver oil. Average machine-made emulsion.

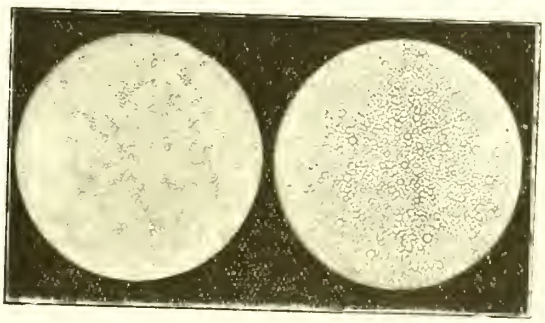
A small mound (about 5 grams) of dried sodium sulphate is made on a watch-glass, and a "crater" capable of holding 2 grams formed at the top. The weight is taken, the crater filled with emulsion, the weight again taken, and the contents of the watch-glass tipped into a mortar; the watch-glass will be left perfectly clean. After absorption of the emulsion the sulphate is triturated and the small nodules formed are broken up by the addition of 10 grams of coarse sand. The powder thus formed is transferred to the extractor and the mortar rinsed twice with carbon tetrachloride. Extraction is allowed to go on vigorously for two hours; in this way an anhydrous solution



E F

E, Dispensed to prescription; was 20 per cent. deficient in cod-liver oil. F. Cod-liver oil emulsion dispensed by novice.

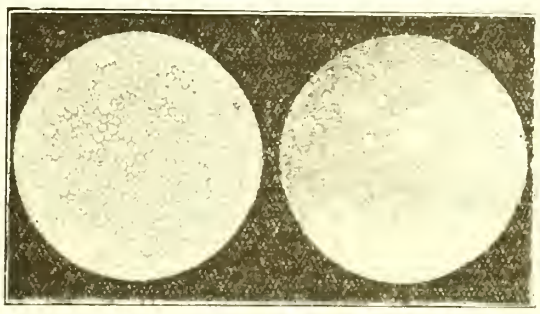
is obtained, which, after the distillation of the solvent, requires only an hour to dry in the water-oven; nor should longer be allowed. During the drying the flasks are preferably laid on their sides to allow the escape of the heavy carbon tetrachloride vapour. The iodine-figure may be obtained by a second extraction, using the carbon-tetrachloride solution without distillation.



G H

G, Hand-made vaseline emulsion (42.4 per cent.). H, Cream.

The process can be used for malt and oil if a smaller quantity is taken to avoid the formation of pill-mass, which can only be dried with difficulty. After checking the accuracy of the process, the author used it on thirty-two samples of emulsion, twenty-four of which were cod-liver oil emulsions, the remainder being emulsions of liquid petroleum, petroleum jelly, or vaseline. The samples emanated from wholesale houses, or were dispensed to prescription; the proportion of oil described on the label varied



I J

I, Lin. ammoniæ, B.P. J, Magnified 100 times: contained 10 per cent of froth.

from 25 to 50 per cent., and was generally found to be as stated. The samples prepared according to prescription were all more or less inaccurate, which is what might be expected from the various difficulties encountered in dispensing the emulsions.

The author then dealt with the size of the oil globules, which, from the physiological point of view, is of less importance than from that of "elegant pharmacy," and submitted the micro-photographs which we reproduce on p. 217 He then gave some of his ideas on emulsions as a practical pharmacist.

Emulsifiers.—Acacia is *facile princeps*. Soap, a very fair emulsifier, was not present. Substances such as starch, dextrin, tragacanth, egg, casein, moss, and gelatin are used in many cases to bolster up a bad emulsion rather than to prepare a good one. Almost all commercial emulsions are too thick.

Methods of Preparation.—(1) The dry method in which the oil is mixed first with the powdered acacia before adding the water ("by far the best"); (2) the alternative process ("only successful when the proportion of oil is kept sufficiently high to form a jelly"); and (3) churning ("only adapted for large quantities"). A mortar holding a gallon should be used for a pint of emulsion, and when the "crackle" is quite loud the dispenser may be sure that the oil globules are nearing 10 μ diameter.

Rate of Separation depends on the difference between the sp. gr. of the oil and menstruum (the greater the difference the faster the separation), viscosity of the menstruum, and that due to the increased percentage of oil and oil-to-water surface ratio and the size of the globules.

Amount of Separation depends on the comparative uniformity of the globules and the surface tension of the oil.

Many of these points were separately considered, and the author finally defined a good emulsion as one which is no more viscous than glycerin with the oil globules not exceeding 15 μ, and which does not throw down a sediment on dilution.

Discussion.

The President invited discussion, but as no one rose he said he thought it was because it was a paper which needs studying before an opinion can be pronounced. It shows that viscosity and surface tension play important parts in the study of emulsions.

At this stage a reply was received from Mrs. Attfield to the telegram which had been sent earlier in the morning. The reading of the reply was loudly acclaimed.

It was now time for luncheon, which was held in the King's Hall adjoining. After the luncheon the presentation was made of the books provided by the Bell and Hills fund.

The Social Side of the Conference.

Tuesday's Informalities.

The luncheon on Tuesday took place in the King's Hall of the Armstrong College, the President being in the chair. Each member and visitor found a copy of the "Guide to Newcastle and Northumbria" reprinted from The Chemist and Druggist, and those who detected the blank pages for the autographs of friends were not slow in circulating their copies up and down the tables. The luncheon was nicely served and was followed by a toast list. The President proposed the first toast, "Edward I. of Great Britain and Ireland, commonly called Edward VII.," and this was followed by "The Vice-Principals of Armstrong College," a vote of thanks to the College authorities being embodied. In proposing this toast Mr. Toeher referred to the links which bind the College with Aberdeen, several of the professors of the former having been either educated at Aberdeen or occupied professorial positions at the University. Professor Lebour replied and recalled the establishment of a course of lectures for pharmacists by the North of England Pharmaceutical Association. The lectures were held at the College, which is thoroughly equipped for the work, but unfortunately there was a lack of students. "Perhaps," added the Professor, "this is due to the classes being insufficiently known." Quoting from an old syllabus of the course the speaker made some good points in commenting on the applicability of pharmaceutical operations to everyday life. Mr. Naylor then presented the gift of books to the local Association. Mr. T. Maltby Clague received the books, stating that those given at the last visit of the Conference are in a good state of preservation in the library of the Armstrong College, where the new lot will also be housed. The College authorities have announced that members of the Conference and of the local Association may not only consult these books at all reasonable times, but may use the splendid library belonging to the College. Sir Edward Evans then proposed the toast of "The Retiring Secretary, Mr. Edmund White." Sir Edward, who was sitting beside Mrs. White, said that he had asked her to tell him something about Mr. White, and, he said, "everything Mrs. White has told me has been of her husband's good qualities." Sir Edward referred to Mr. White's six years' service as one of the Hon. Secretaries of the Conference, of his councillorship of the Pharmaceutical Society, and of the work he has done in the separation of the rarer metals. Mr. White stood upon a chair to reply and said he was glad to hear that his services had been appreciated. He hoped that his successor would have as pleasant a time as he has had.

Mr. and Mrs. Weddell's Garden-party.—After a short interval the members and the ladies went by tram to Jesmond



Conference Ladies.
Left to right (bottom row), Miss Lesley Weddell, Mrs. Weddell, Mrs. Clague, and Mrs. MacClumpha; (back row) Mrs. Russell, Mrs. Schofield, and Mrs. Foggan.

Dene. This is a beautiful natural ravine, wonderfully picturesque, and used as a public park for Newcastle. The visitors walked up the Dene and were photographed at the Old Mill, being ranged among the rocks of the waterfall. Continuing the walk, and leaving the Dene, the delightful residence of Mr. and Mrs. Weddell was reached. This house—the North Cottage, Adderstone Crescent—was built in 1903, and every inch of it is evidence of the excellent taste of the inhabitants, who, it may be added, arranged all the details of the structure and the special furniture. The outside is roughcast, with oaken beams showing in the plaster, the windows are leaded, and all the fittings are in keeping with the style



Conference Group at the Royal Victoria Infirmary.
Mr. Clayton, of Oxford, is the "Mere Man."

of the house. Passing through the house the visitors were shown into the gardens, which are designed in the same excellent taste, the well-kept lawns and banks of flowers and trailing plants being evidence of the loving care bestowed on the garden. Tea was served in a large marquee, and there was a band playing the while. Nearer the house the Newcastle Quartette dispensed sweet music, and those who cared to could view a fine series of autochromes. The weather was unfortunately dull, but there was no rain during the afternoon. Despite the absence of sunshine, everyone seemed

pleased to have had an opportunity of viewing such a unique country residence.

EVENING RECEPTION.—At 8 o'clock the same evening Mr. and Mrs. Weddell, on behalf of the Local Committee, held a reception at the Grand Assembly Rooms, which was followed by a chamber concert and dance. The concert was a high-class one of songs, duets, and quartettes, the large hall being quite full with a very appreciative audience of ladies and gentlemen. At the end of the programme the company adjourned to another hall, where refreshments were served. In the meantime the chairs were removed from the floor of the large hall, and at 10 o'clock dancing began and went on till midnight.

OTHER ITEMS.

THE Ladies' Committee gave universal satisfaction to the visiting ladies when they arranged to go over the Royal Victoria Infirmary, which is close to the Armstrong College. It was described in detail in THE CHEMIST AND DRUGGIST a year or so ago. Mr. Sydney Dunstan explained the working of this well-organised dispensary, and much interest was also taken in the kitchen and laundry, the apparatus used embodying the most modern types of labour-saving devices. The members of the local committee who conducted this party included Mrs. Dean, Mrs. Gilderdale, Mrs. Milligan, and Mrs. Wyatt.

The members of the Conference are about equally distributed, as to residence, among the Grand Hotel, the County Hotel, the Royal Turk's Head, and the Metropole. Although some prefer concentration in these cases, others find several advantages in the arrangement of the various parties. The Scotsmen are mostly at the County, and although the motto appears to be early to rise it is by no means early to bed.—Messrs. Parke, Davis & Co. distributed samples of euthymol preparations to members of the Conference at the various hotels. It can hardly be said that chemists are strangers to these products, but most of those who received the samples took the opportunity of personal trial of one or other of the specimens.—Mr. John Cleworth, the *C. & D.* photographer, took some pictures of the ladies at the Infirmary, and they were all anxious to know how the pictures turned out. "You will see them in this week's *C. & D.*," was the answer they got. Everybody has a good word for the hardworking and



CONFERENCE GROUP AT THE INFIRMARY.

energetic Hon. Secretary of the Local Committee—Mr. T. Maltby Clague. He is everywhere, and when anyone is in doubt it is to Mr. Clague he or she turns. Mr. Clague's two sons are of great service all day; they act as door-keepers and give out the programmes of the proceedings in a most obliging manner. "Like their father," said my lady companion. I did not say "Yes" with alacrity, as at the luncheon Mr. Clague publicly confessed that he had never won a prize for good conduct.

THE 1863 MEETING.

At the luncheon on Wednesday there was distributed to the guests on behalf of the Proprietors of THE CHEMIST AND DRUGGIST a facsimile reprint of the report from our issue of September 15, 1863, of the inaugural meeting held in Newcastle, on the second of that month, under the presidency of Mr. Henry Deane, F.L.S., who was elected the first President of the Conference. The report extended to five octavo pages, equal to a little more than two of these pages, and the reprint forms an interesting souvenir of the forty-sixth Meeting.

Wednesday Session.

The meeting on Wednesday morning was late in beginning, and it was nearing ten o'clock when the President gave an official

WELCOME TO THE DELEGATES,

and invited them to take part in the discussions. They were -

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.—Messrs. J. F. Harrington (President), F. G. Gibson, P. F. Rowsell, C. Symes, E. White, J. R. Young.

NORTH BRITISH BRANCH.—Messrs. J. P. Gilmour (Chairman), W. Giles, Dr. Coull, W. B. Cowie, W. S. Glass, J. Kitchin, Jas. Nesbit, J. A. Russell, J. W. Sutherland, W. P. Wilson.

PHARMACEUTICAL SOCIETY OF IRELAND.—Messrs. John Smith (President), G. D. Beggs, R. Blair, W. F. Wells.

ABERDEEN PHARMACEUTICAL ASSOCIATION.—Messrs. Craig, Giles, Kay, James Paterson, Spence, Hay.

BRADFORD CHEMISTS' ASSOCIATION.—Messrs. Hanson and Silson.

CAMBRIDGE PHARMACEUTICAL ASSOCIATION.—Mr. E. S. Peck.

EDINBURGH CHEMISTS', ASSISTANTS', AND APPRENTICES' ASSOCIATION.—Messrs. Cowie, W. Duncan, J. Rutherford Hill.

EXETER ASSOCIATION OF PHARMACISTS.—Mr. W. H. Gadd.

FORFARSHIRE CHEMISTS' ASSOCIATION.—Mr. Malcolm Macfarlane.

GLASGOW AND WEST OF SCOTLAND CHEMISTS' ASSOCIATION.—Messrs. J. W. Sutherland (President), J. P. Gilmour, W. L. Currie, R. Tocher, G. L. Merson, H. McMurray.

GUILDFORD CHEMISTS' ASSOCIATION.—Mr. J. H. Mather.

LEEDS CHEMISTS' ASSOCIATION.—Messrs. Beacock, F. Pilkington Sargeant.

LIVERPOOL CHEMISTS' ASSOCIATION.—Messrs. W. P. Evans, Marsden, Symes, Wokes.

LONDON, WESTERN CHEMISTS' ASSOCIATION.—Messrs. Martindale, Procter, E. White.

PUBLIC DISPENSERS' ASSOCIATION.—Mr. C. T. Rutter.

MANCHESTER PHARMACEUTICAL ASSOCIATION.—Messrs. Cleworth, C. A. Johnstone, J. H. Franklin, W. Griffiths Hughes.

NEWCASTLE PHARMACISTS' ASSOCIATION.—Messrs. W. Atkins, W. Buckley, T. M. Clague (President), J. W. Crake, R. Cubey, J. J. Dakers, jun., E. Dean, G. Foggan, J. H. Foster, F. Gilderdale, W. R. Gray, C. J. Heselton, R. Ismay, W. Kerse, W. D. Kinnis, R. V. Low, R. McClumpha, A. Napier, W. H. Noble, W. Pescod, H. Pattinson, C. Ridley, C. I. Russell, T. Simpson, R. B. G. Silverside, A. Turnbull, G. Weddell, G. Whitehead, G. Williamson, T. Wray, R. Wright, W. Wyatt.

NOTTINGHAM PHARMACEUTICAL ASSOCIATION.—Messrs. Adamson, Eberlin.

NORTH STAFFORDSHIRE CHEMISTS' ASSOCIATION.—Mr. Edmund Jones.

OLDHAM PHARMACEUTICAL ASSOCIATION.—Mr. H. Bagshaw.

OXFORD CHEMISTS' ASSOCIATION.—Messrs. C. Clayton, J. Dolbear.

PORTSMOUTH PHARMACISTS' ASSOCIATION.—Mr. T. O. Barlow.

SUNDERLAND CHEMISTS' ASSOCIATION.—Messrs. Fairman, J. Harrison, Hodgson, Rankin, Welton.

TUNBRIDGE WELLS ASSOCIATION OF PHARMACISTS.—Mr. Hobbs.

WOLVERHAMPTON CHEMISTS' ASSOCIATION.—Mr. W. R. Dunn.

WORCESTER AND DISTRICT CHEMISTS' ASSOCIATION.—Mr. John Twinberrow.

Should the Dispensing of Medical Prescriptions be Exclusively Confined to Pharmacists?

By the PRESIDENT.

THE great grievance which the pharmacists of England have above all others is that they are the members of the only class in the Kingdom specially educated and trained to prepare and dispense medicines and, as such, many of them get little if any employment after they qualify in the work they have been specially trained to perform, simply because the work is done by the medical profession. I have no hesitation in at once answering the question, therefore, in the affirmative, because while practitioners are specially trained in many highly important sciences they have no practical training to speak of in pharmacy. All the same we must recognise that it has been a practice from time immemorial for doctors to supply their own physic. If, however, any practical measure could be devised whereby they could now be relieved of this encumbrance—for encumbrance to their work as medical men it is—they would, I feel sure, hail the measure with joy. The total transference of the dispensing of medical prescriptions from medical men to pharmacists would in my opinion be accompanied with advantages to the medical man, the pharmacist, and the public. No disadvantage would follow, excepting the disadvantage of slight delay in remote country districts, sparsely populated, and in these districts I think it might be more advantageous to the patient for the medical man to dispense the remedies required. The advantage to the medical practitioner would be that he would be freed from the worrying details of a mechanical nature, foreign to his training and his work, and he could therefore devote his time to much more profit in the proper exercise of his profession, and, by snatching a little time for rest, cease

to be the slave-driven, closely tied up, worried professional man he so frequently is all over England. The dispensing practitioner is both a trader and a professional man. He ceases to be a trader the moment he stops selling medicine. The advantage to the pharmacist would be that he would be exercising more and more the calling he has been specially trained and examined to perform. The origin, properties, preparation, and dispensing of medicines are his special sphere. The advantages to the public are many. Without necessarily implying inaccuracies in dispensing by medical men or doubting their skill in the mixing of medicaments, dispensing by pharmacists would be advantageous to the public because their compounding to the medical man's prescribing is of the nature of a check on each. The pharmacist checks the medical man's prescribing, and the medical man checks the pharmacist's dispensing. With a clear and definite understanding between the medical practitioner and the pharmacist with regard to the repetition of prescriptions, no grievance bearing on the frequent repetition or the hawking of prescriptions need arise. No loss, no disadvantage, but rather a gain in the form of a greater security would therefore result from the transference as suggested. Without labouring the point at all, these are facts. The separation of medicine and pharmacy is a differentiation further urgently called for in view of the great strides made in medical and chemical science. These discoveries, owing to their complexity and practical application, involve much labour and indeed much study on the part of the medical practitioner if he wants to keep abreast of modern medicine. Mere dispensing—unimportant to him—is, therefore, irritating distraction from work which is absolutely vital to sound medical practice. Friendly societies are specially interested in this matter. How is it possible to bring about the separation of medicine and pharmacy? Obviously we cannot call upon the General Medical Council to act. The Pharmaceutical Council has even less reason to interfere. It has no connection with or control whatever over medical men, and its interference as a statutory body would also be highly resented. Our only hope is to proceed unofficially and individually in each locality, and also collectively and unofficially, through the great voluntary medical and pharmaceutical Associations. Co-operation should be the watchword. My proposal is to institute a joint standing committee, consisting of members of the British Medical Association and the British Pharmaceutical Conference. Later, if practicable or desirable, interested members of the public, including leaders of friendly societies, might be added. This committee's preliminary duties would be of a threefold character, and would include the following: (1) Dispensing problems; (2) prescribing problems; (3) drug problems. Firstly, it is desirable the committee should collect information from all parts of Great Britain bearing on the actual practice in vogue, with respect to dispensing, and with respect to the facilities existing for a transference of the work to pharmacists, in the cases where the work is performed by or on behalf of medical men. Secondly, it is desirable the committee should collect information from all parts respecting the practice of treating ailments and prescribing for them by pharmacists, and by other persons untrained and unqualified for these duties. The composition of the proposed committee is of such a character as would enable it to give a practical definition of where first aid and simple regulation of bodily functions—a necessity and a duty for every person living—ends, and where medical practice begins. No absolute dividing line exists, but a working formula is, I believe, possible. I say, a working formula, for we must always bear in mind that the public is not a widely distributed population of marbles, uniform in size, composition, and quality, with which we can play at will, but a population of human beings, varying in educational attainments, acuteness of intellect, and strength of character throughout very wide ranges. The committee will tell us whether the public should itself judge on these things (the pharmacist abstaining from opinion and action), or, if not, it is desirable we should get a workable formula from the committee which would be etiquette for the pharmacist to abide by. Thirdly, the committee could deal with the drug problem generally by collecting data as to the composition, sale, and effect on the public of advertised nostrums. The committee, in such work, would pave the way for the institution of the suggested Board of Control, whose function would be to suppress quackery and sophistication and to supply the public with useful information. The committee could also render useful unofficial assistance to pharmacopœial authorities when they come to consider—as they are now doing—the revision of the Pharmacopœia. Reverting to the first and primary object of the committee, that of co-operating with medical practitioners to relieve them of dispensing, it appears to me that much assistance can be obtained from those with club practices. The medical practitioner is paid for advice and medicine. How much must be allocated for advice and how much for medicine? This would be discussed by the committee, and the proportions, if possible, determined from a knowledge of the cases where advice and medicine are paid for separately, and from a knowledge of the economic conditions of each locality. Excepting Glasgow, the branches of the friendly societies having a footing in Scotland all contract separately for advice and medicine. The same is true with regard to parish councils and other public bodies and institutions. No harm, but much good, would result from collecting these data, and this would be the first work undertaken by the Committee.

A Medical Reply.

Dr. Farquharson (Newcastle-upon-Tyne), who met with a cordial reception, tendered the delegates, on behalf of the medical profession in Newcastle and district, a very hearty welcome. He had only received Mr. Tocher's paper a few minutes previous to the meeting. In discussing such a subject one had to recognise its hydra-headed character—the ramifications of the difficulty that beset them on every side when they came to deal with it. "I think that you can count on the friendly approval of the medical profession in the course that you suggest, Mr. President," the speaker here remarked. "What I feel is that you cannot feel certain upon their active support. (Laughter.) We are all pretty much in the condition of the Aberdeen beadle who, on his death-bed, made it his proud boast that he had resisted every reform that was ever introduced into the Kirk. (Renewed laughter.) That is pretty much the attitude of my profession, so far as conversation with my medical brethren enables me to estimate it." Unfortunately, Dr. Farquharson continued, the members of the friendly societies in Newcastle liked to get out of the medical men the maximum of service and attendance for the minimum of payment. (Laughter.) In the northern branches of the British Medical Association, after years of struggle and fighting, medical men who undertook contract practice had got, not a living wage, but merely something which prevented starvation. As a preliminary to the proposition of the President becoming realised, something would have to be done in the way of controlling the sale of advertised medicines. (Hear, hear.) "You cannot," said Dr. Farquharson, "expect the medical profession to give up what many of them look upon as a privilege if you are going to countenance all the advertised remedies, the composition of which none of us know anything about. (Applause.) You cannot go and throw advertised cure-alls at the head of the public and ask us to give up dispensing. You must be prepared with something reasonable, with the prospect that you will repay the medical men for the sacrifice they make when circumstances arise. I do not know that anyone can deny that some patent medicines have done some good. I believe they do some good in a lot of cases. I do not know that one can deny that. I have met with cases where recovery has followed, but whether they were because of or in spite of patent medicines I do not know." (Laughter.) That phase of the question, he proceeded to say, must be tackled, although he acknowledged that the question it involved was an extremely difficult one to settle. He agreed with the President that the whole matter was one for a joint conference between a delegation of the British Pharmaceutical Conference and of the British Medical Association. These were the only two bodies that

could do any good in the matter. Both had practical experience, professional and commercial interests at stake, and the whole of the difficulties which surrounded the matter ought to be taken up and discussed by them in a proper spirit. One of them was a common impression on the public mind as to the supplying of medicines. It had struck him many a time that nothing could be easier than for the medical man to write a prescription and then ask the patient to take it to the nearest chemist to compound. But more often than not, from the urgency of the case or from some other reason, the patient or those who waited on the medical men replied that they preferred to get the medicines from them themselves. That this unworthy imputation and slur upon the pharmacist was founded upon ignorance he was perfectly certain. Many people thought that the medical man had something better in his surgery than the chemist was likely to give him. Personally he thought nothing of the kind, for in an honourable profession there was no room for a suspicion of that kind. Still, there was a prejudice in the public mind that had to be overcome. Taking it all and all, he heartily agreed with everything Mr. Tocher had suggested. He did not think any of them desired to see the road opened for a condition of things which prevailed in towns like Glasgow, where there were medical practitioners who not only had their own houses and surgeries, but were the owners of so-called chemists' shops. They not only got their fees as medical men, but also got money for their prescriptions. That condition of things he regarded as an absolute disgrace. ("Hear, hear," and applause.) There they had bits of laddies behind the counter whose business it was to dispense pennyworths of peppermint or halfpenny-worths of castor oil. The mere presence of these boys in shops of that description where medical preparations were compounded was an absolute menace to the public safety and ought to be abolished at once. (Applause.) The medical profession, he believed, would be perfectly friendly to the Chairman's proposition, because he did not know half-a-dozen of them who would not be glad to get rid of the drudgery of dispensing. Besides, they were not paid for it—at least he did not reckon that he was paid for it. He did not know that any charge could be established for medicine and professional attendance. The attitude of the profession, though friendly, ought to be stimulated, and he thought he would take upon himself the duty of reviving this discussion at the branch meeting of the Association. (Applause.) If thought could be stimulated all over the country they could then create an opinion which would lead to a much more rapid *rapprochement* between the delegates of that Conference and those of the Medical Council. Medical men were too content to go on as they had been, and to accept drudgery as a badge of service. "They are very like the ruling elder of a Scotch kirk," Dr. Farquharson proceeded. "A very energetic parish minister was appointed to it, and he, among other things, got a wealthy parishioner to give a beautiful stained-glass window, which was duly fixed in the east end of the kirk. The minister took the ruling elder to the kirk and explained that the pictures were designed by a Royal Scotch Academician, and that the fine coloured glass was provided and fixed by one of the finest firms of artificers in the country. The ruling elder looked and then replied: 'Academician or nae Academician, arteeficer or nae arteeficer, I canna see hoo ye can improve on the licht that wis given by the gless as God made it.'" (Loud laughter.) That indicated the attitude of the profession. They are content with the things that Providence has sent them, and they require to be stimulated to break into further action. I have had extreme pleasure in coming here this morning, ladies and gentlemen, and I am specially grateful for this thoughtful and extremely moderate paper—a paper which, while expressing no extreme views, crystallises in the minds of many medical practitioners that which I have thought and they have thought for many years past." (Loud applause.)

Other Views.

Mr. W. L. Currie, having thanked Dr. Farquharson, said he could recollect when there were only three chemists' shops in Glasgow. All the others were conducted by medical practitioners. Now, he thought, there are from 180 to 190 qualified pharmacists in Glasgow, but there were three hundred and odd doctors' shops. (Cries of "Shame!") In not one of these doctors' shops, as they were carried on at the present time, is there a qualified dispenser, as far as he knew. That is a very unfair and unsatisfactory state of things. He considered that medical prescriptions should be exclusively confined to pharmacists. Pharmacists were the trained competent men. They were examined by the Pharmaceutical Society, which had been empowered to examine them to see whether they were fit to be let loose upon the public. And the great majority of the medical profession, he thought, would recognise that they were the proper individuals to dispense their prescriptions. When a medical man came to dispensing prescriptions himself, or to keep a surgery for so doing, it was open to doubt whether the safety of the public received any consideration at all. He contrasted the skill of the pharmacists as dispensers with the comparative inexperience of medical practitioners in that regard, and proceeded to criticise modern prescribing, instancing, amidst laughter, a recent prescription from a medical man in these terms: "Keating's lozenges—one box." And another from a well-known practitioner: "Frog in the throat: one bottle." He asked, Are medical men justified, even in their own interests, in prescribing such things as Fellows's syrup, and tabloids for this, that, and the other thing, and handing the prescriptions to the pharmacist to dispense? When the patient got these things he knew exactly how to obtain them on another occasion without going to the medical man. He agreed with Dr. Farquharson when he said that the chemist who recommended proprietary articles over his counter was either a knave or a fool. Mr. Currie proceeded in strenuous terms to criticise dispensing doctors, urging that they should give up dispensing altogether and have nothing to do with medicine; and having given instances in proof of the necessity for this, concluded by saying that he was of the emphatic opinion, and he would like it to be endorsed by the British Pharmaceutical Conference, that some steps should be taken—whether by the appointment of a Joint Committee or by other means he was not prepared to say—to have this question discussed and dealt with. They knew that the British Medical Association had moved somewhat. If medical men would strive to bring about proper conditions, something would arise out of the discussion which had originated there that day. (Applause.)

The Chairman then introduced Dr. Cumming, of Edinburgh, describing him as a medical man but also a pharmacist.

Dr. Cumming at once plunged into the subject of discussion, and, turning to Mr. Currie, directed to him the remark, "You will never get what you are asking for if you arouse the opposition of the medical man at the very outset. There must be no antagonism. You must approach the medical man in a conciliatory spirit. You must remember he has the right to dispense, and you must get him brought to the view of seeing that it will be to his advantage to get you gentlemen to do it for him." (Applause.) Continuing, he said that some remarks had been made about the pharmacist prescribing and knowing more about prescribing than the medical man. But they had nothing to do with prescribing. They were what he might term the cooks who prepared what the medical men prescribed. They were asking them to give up something, and he was there to speak in support of the proposal, but they as pharmacists must face the thing straight and take all circumstances into consideration if they were to expect what they were all desirous of getting. (Applause.) Dr. Cumming then proceeded to read a series of observations in which he discussed (1) the weal of the patient—what is best for him? (2) the art of dispensing—the medical man is not trained in it; (3) the skill of the pharmacist—which is to deal with drugs, not diagnoses. He agreed with Mr. Tocher that when the prescription is dispensed by the pharmacist it is a check on the doctor and for the weal of the patient. He admitted that a certain class of medical practice is carried on which cannot live unless medicine is given, and it is a disgrace to the profession. Finally, he said, in regard to the pharmacist helping on the desired consummation: "Let him see to it that his student days are not finished at the Minor, that it rather is but an entrance to an extended post-graduate course. This, adopted first as a duty, will become to him a pleasure and a profit. And what the result? Go where you will he will become a power, he will be able to command practice and confidence, he will take a position in the community which could never be obtained if, on the contrary, his learning acquired, he allowed it to drop. Gentlemen, do I need to instance cases? They are before you daily. I see them now. He must keep his premises as well as his person as he would his most delicate balances. *What can the pharmacist do?* This and much more. Take the question to you, think and ponder it, and put the result into operation, and the force will be irresistible." (Loud applause.)

Mr. Peter Boa said that when he saw the programme of

proceedings it struck him that the Conference Committee had adopted a bold procedure in permitting such a discussion to take place at a meeting of the kind. At the same time it occurred to him that their action indicated a hopeful condition of affairs, because the Committee must have had considerable confidence in the friendly relationship which existed between the medical profession and themselves before they agreed to have a discussion of that character. His opinion was that dispensing of the ordinary kind ought to be confined to the pharmacist. They ought to have in their Pharmacy Act a section giving them the sole right to compound, as in Ireland. It did not seem to be a question of which of the two was the more qualified man to perform the dispensing—the pharmacist or the medical man. They were both allowed to do it, and naturally they exercised their own discretion as to the doing of it. The tendency and the rapid progress of modern education was to specialise, and the separation of dispensing from the medical practice would come in the ordinary course of events. Dr. Cumming remarked that he had no hope from legislative interference unless it came from the medical side. It was only fair to the medical profession to admit that the dispensing of medicines was not a matter that they desired. It was thrust upon them in self-defence. Mr. Boa then gave an interesting account of the origin of dispensing by medical men. He showed that at one period in the history of medicine in England it was the business of the apotheearies to dispense medicines. They subsequently began to attend people in a medical way, and it seemed to have been the case that they could only recover their fees in cases where they supplied medicines. The medical practitioners naturally had to supply medicine as well as the apothecaries practically in self-defence. In Ireland the apothecaries were practically in the same position, but they behaved in a different way. They confined themselves strictly to the dispensing of medicine. They therefore always had the complete confidence of their medical *confrères*, and when the Pharmacy (Ireland) Act was passed the monopoly of the apothecaries fell upon the pharmaceutical chemist, and they had still the right of compounding, a privilege, of course, being reserved for the medical men to do so under necessary circumstances. In Scotland they were not troubled with apotheearies, and consequently they had practically complete separation of dispensing and the practice of medicine. Having referred to the fact that the authorities in England connected with the administration of the poor law had forbidden the dispensing of medicine by medical men, Mr. Boa went on to say that in the higher branches of the medical profession the obligation was cherished to have nothing to do with the dispensing of medicines or the sale of drugs, and in the best class of pharmacies in Great Britain and Ireland what was commonly known as counter prescribing was entirely tabooed and reduced to a minimum. It could also be shown that there was less progress from a medical point of view in districts where medical dispensing was most carried out. Then, again, there was practically no progress in pharmacy where there was no prescription work to do, so that the continuation of dispensing by medical men in a way retarded the progress of both medical men and pharmacists. One aspect of the question might lead to a more rapid result, and that was that the public might take the matter up on their own account. One of the labour leaders made the remark to a medical friend of his in the Midlands that he believed in one man one job, and that they would very soon make the medical man confine his attention to his proper duties. (Applause.) That might be regarded as a socialistic idea, but he hoped it would be found expedient for the safety of the public to have a separation of the two branches of medicine without any friction between either. (Applause.)

Dr. John Wishart was the next speaker. He said that, in the present instance, the profit of the transaction had gone to neither the medical profession nor to the pharmaceutical, but to a third section—the British public. He submitted reasons, which he considered that medical men would advance for and against giving up dispensing, and submitted the following points for consideration:

1. Dispensing by doctors and prescribing by pharmacists in this and in other countries.
2. The supply of medicines to patients who contract for medical attendance and medicines together, and more especially where no pharmacist resides within reasonable reach.
3. The return of the prescription to the doctor instead of to the patient, not only for the sake of ensuring the doctor his just fee, but also of preventing the drug habit. This includes the question of who is the real owner of a prescription.
4. The accuracy of dispensing (sample shown from confines of Northern Division of B.M.A.).
5. The supply of medicines during closed hours.
6. The free distribution of medicines by hospitals dispensaries, etc.
7. The quack-drug trade, including the public advertising of the same.
8. The urging of University authorities throughout the kingdom to pass resolutions similar to the Aberdeen University one which has been in force since 1901, and which is as follows:

"Whilst it is admitted that the exigencies of practice in certain localities may sometimes render it unavoidable for a medical practitioner to supply to his patients the remedies he prescribes, the Medical Faculty of this University is of opinion that it is undesirable and detrimental to the position of medical graduates of the University that this custom should be followed under other circumstances; and further, it regards the sale of objects other than remedies by its medical graduates as, under all circumstances, to be strongly deprecated." In this connection let me remind you that no medical man can become a Fellow of the Royal College of Physicians of either England or Scotland if he dispenses medicines or enters into a contract with a pharmacist for the supply of medicines to his patients.

The President here suggested that the discussion might advantageously be brought to a close.

Mr. J. C. Pentney (London) remarked that he should have liked to have made some remarks, particularly in reply to Dr. Cumming.

Mr. Wells then proposed the following resolution:

That this matter be referred to the Executive Committee of the British Pharmaceutical Conference to consider, and, if thought advisable, to confer with the British Medical Association in reference to it.

Mr. Wells suggested that in approaching the subject there should be a little give and take on both sides. He believed that if the thing were fairly decided there could be no question in the world as to which side was right. It was the interests of the public that had to be looked to. It was not what was good for the doctor or good for the chemist, but what was for the benefit of the public that they had to keep in view. (Applause.) Proceeding, Mr. Wells said that in Dublin there were very few medical men who made up their own prescriptions, and those of them who did so were thought very little of. (Applause.) The medical men as a body would have nothing to say as to compounding, and the pharmaeists, for their part, stuck loyally to the medical man. The medical man was not trained as a pharmacist, and the pharmacist was not trained as a doctor, but there was nothing to hinder the latter prescribing if he thought fit to do so.

Mr. W. Giles (Aberdeen), in seconding the resolution, said that the importance of the question deserved very careful deliberation before definite action was taken upon it. If some definite result followed that day's discussion, it would bring advantage to the medical profession and promote the interests of pharmacists. But after all the public would be the chief gainers in the end. (Applause.)

Mr. J. C. Pentney, London, proposed as an amendment to the resolution that the Executive Committee should have power to add to their number. The President, he remarked, had allowed him five minutes in which to express his views, but he would require five hours in which to do so. (Laughter.) Dr. Cumming in his address had occupied a good deal of time in showing what chemists ought to be, but he did not favour the meeting with his views of what doctors ought to be. So far as hostility was concerned, he greatly admired the courage of the medical gentlemen who had spoken in bearding the lions in their den. (Laughter.) He believed that a Bill embodying the propositions that had been made would be passed by the members of both Houses of Parliament, because it would commend itself to them in so far that it would protect their own skins. They did not care twopence for the chemist, but they were of one mind that no one should dispense their medicines unless he were a qualified man. Concluding, Mr. Pentney ridiculed the idea of the medical profession cutting off their own noses by giving their patients those horrible tabloids. Such a policy he regarded as suicidal.

The President intimated that Mr. Wells was willing to accept Mr. Pentney's amendment, and to embody it in his resolution.

The resolution was then declared carried. The discussion commenced a few minutes before ten, and terminated at 11.30.

Problems of the Poisons Schedule.

By H. Wippell Gadd, F.C.S., of the Middle Temple, Barrister-at-Law.

The author, after a brief introduction, proceeded to comment upon some items in the Schedule, contrasting the 1868 and 1908 entries, the comments being on the latter. We reproduce them as far as space permits, the items being as in the 1908 Schedule, and all italics are words which did not occur in the 1868 one:

Alkaloids, all poisonous vegetable alkaloids, *not specifically named in this Schedule*, and their Salts, *and all poisonous derivatives of vegetable alkaloids.*

These last words are most important, as they introduce into the Schedule some potent remedies which were previously outside it, but they do not prove to be as comprehensive as at first reading they would appear to be; and, moreover, like the historic description of a crab, they are excellently

definitive with but three reservations—viz., (1) the difficulty of giving an exact meaning to the word "poisonous," (2) the uncertainty as to what is a "derivative," and (3) the trouble which even arises when it is attempted to state exactly and concisely what is meant by an "alkaloid." "Poisonous," like the corresponding substantive "poison," is a word that may be made so comprehensive that it ceases to warn, or so exclusive that many substances of moderate toxic power are left outside its range, with consequent danger to life and health. Wynter Blyth, in his classic work, defines a poison as—

> A substance of definite chemical composition, whether mineral or organic, which is capable of being taken into any living organism, and causing, by its own inherent chemical nature, impairment or destruction of function.

Murray, in the New English Dictionary, gives—

> Any substance which, when introduced into or absorbed by a living organism, destroys life or injures health, irrespective of mechanical means or direct thermal changes. Popularly applied to a substance capable of destroying life by rapid action and when taken in a small quantity.

The present author submitted, as a working definition of a poisonous vegetable alkaloid or a poisonous derivative of a vegetable alkaloid, the following:

> Any such alkaloid or derivative the maximum medicinal dose of which for an adult does not exceed two grains.

This sounds arbitrary, empirical, and inconclusive, but it brings into the Schedule surprisingly few substances, and is (the author said) good for practical purposes.

What is a derivative of a vegetable alkaloid? Murray states that in chemistry a derivative

> is a compound obtained from another—*e.g.*, by partial displacement.

The Commissioners of Inland Revenue, in their regulations made under the Spirits Acts, speak of

> Methylated spirit, or any derivative thereof, with the exception of sulphuric ether, chloral hydrate, or chloroform.

Such meanings can surely not be given to the word "derivative" in the present connection, as they would bring into the Schedule substances which the Legislature never contemplated including. If "derivative of" means "manufactured from," ammonia gas may conceivably be called a derivative of an alkaloid, *ergo* a concentrated solution of it may be within the Schedule. The author submitted that what chemists understand by "derivative" is—

> Any substance which may be prepared from another—for example, by substitution or oxidation—without essential alteration in the molecular structure of the parent substance.

What is a vegetable alkaloid?

> A nitrogenous plant-product of a basic nature, which is either (*a*) a derivative of pyridine, (*b*) a derivative of quinoline, or (*c*) a substituted amine or amide, which has a more or less simple relation to ammonia.

Having thus defined the terms of this entry in the Schedule, Mr. Gadd submitted the following list of substances used in medicine which fall within its scope:

Acetomorphine and its Salts (heroin).	Eumydrine (methyl atropine nitrate).
Apomorphine and its Salts.	Euporphine (apomorphine methyl bromide).
Benzyl-morphine hydrochloride (peronine).	Homatropine and its Salts.
Cotarnine and its Salts.	Morphosan (morphine methyl bromide).
Ethylmorphine hydrochloride (dionine).	Narcyl (ethyl-narceine hydrochloride).
Eucodeine (methyl codeine bromide).	Oxysparteine hydrochloride.
	Tropacocaine.

Atropine and *its salts and their* preparations.

Belladonna, and *all* preparations *or admixtures (except belladonna plaisters) containing 0.1 or more per cent. of belladonna alkaloids.*

By the introduction of the percentage principle for belladonna and its preparations the following (formerly in Part 2) are now in Part 1 of the Schedule:

Chloroform of belladonna.	Liniment of belladonna.
Green extract of belladonna.	Suppositories of belladonna.
Alcoholic extract of belladonna.	Ointment of belladonna.
Liquid extract of belladonna.	Ethereal tincture of belladonna.
Glycerin of belladonna.	

The plaster, the pessaries, and the tincture fall into Part 2.

Cantharides *and its poisonous derivatives.*

Here by "derivative" must be meant "manufactured or extracted from," the intention presumably being to bring in cantharidin and the cantharidates.

These exhaust the author's remarks on Part 1. He then referred to the final entry in Part 2, viz.:

> *All preparations or admixtures which are not included in Part 1 of this Schedule, and contain a poison within the meaning of the Pharmacy Acts, except preparations or admixtures the exclusion of which from this Schedule is indicated by the words thereon relating to carbolic acid, chloroform, and coca, and except such substances as come within the provisions of Section 5 of this Act.*

The author proceeded to speak about the exceptions. Section 5 covers the sale of sulphuric, nitric, and hydrochloric acids and soluble salts of oxalic acid, and such other substances as may be added by Order in Council. The only meaning the author could attach to the exception is that soluble salts of oxalic acid might have come within the second part of the Schedule, if they had not already been provided for under Section 5. Again, preparations and admixtures of carbolic acid, chloroform, and coca are specifically dealt with in the Schedule on the basis of percentage composition, being placed in Part 1, in Part 2, or outside the Schedule altogether, according to their strength. The third exception is—

"Preparations or admixtures included in Part 1." Obviously these cannot be in Part 2.

Having thus disposed of the exceptions, the clause may be paraphrased thus:

> "All preparations or admixtures which contain a poison within the meaning of the Pharmacy Acts are in Part 2."

A poison within the meaning of the Pharmacy Acts is a substance included in the Schedule of the 1908 Act, or one which may in the future be added to that Schedule by the method provided in the 1868 Act and adopted in the 1908 Act. So that at present the clause may be reduced to—

> All preparations or admixtures which contain a substance in the current Poisons Schedule are, *ipso facto*, themselves placed in Part 2 of that Schedule.

This brings us to the question, What is a "preparation containing a poison, etc."? Note! it is not "a preparation of," but "a preparation containing." The author submitted that a preparation containing a scheduled substance is a preparation in which that substance retains its essential characters, having suffered no alteration other than the removal of insoluble and inert matter. Thus, tincture of digitalis, although it only contains such parts of foxglove-leaves as are soluble in 60-per-cent. alcohol, may be called a preparation containing digitalis. A decemetinised preparation of ipecacuanha could not, on the other hand, be accurately described as "a preparation containing ipecacuanha." An admixture containing a scheduled poison is a compound in which that poison is mechanically mixed with other substances. Perhaps the matter will be made plainer by leaving abstract definitions for concrete examples. Taking each substance in the Schedule, with the exceptions already noted, the author submitted a table arrangement of British Pharmacopœia articles which are preparations or admixtures containing these substances (in his opinion), and which is printed on p. 225, as it "falls" awkwardly.

In concluding, Mr. Gadd said: To treat ipecacuanha-wine as a scheduled poison is a *reductio ad absurdum*, and, moreover, is calculated to weaken the warning value of the word "poison." He submitted, however, that it contains poisonous vegetable alkaloids, and until we have a judicial interpretation of the doctrine "de minimis non curat lex," the fact that these are present in comparatively small quantities will not affect the question.

There was no discussion on the paper.

Antimonium Sulphuratum.

By F. H. ALCOCK, F.I.C.

AFTER referring to recent work on this substance, and the limited use of sulphurated antimony in medicine, the author dealt with its importance in the rubber industry. The manufacturer of red rubber requires to obtain a product which will pass certain tests for colour, uniformity, resilience, and keeping properties. In this connection sulphurated antimony is a perennial source of trouble, and the aid of the analytical chemist is sought. The substance contains sulphur in several forms, and the manufacturer wants to know what these are, and the proportions. Sulphur may be present as sulphuric acid, calcium sulphate, free sulphur, colloidal and otherwise, and variable quantities of normal trivalent sulphide and the pentavalent

sulphide. The author has also found calcium phosphate among numerous other extraneous compounds, and other observers have mentioned sodium salts. The calcium is not always present as sulphate, nor is much sulphide present, as a rule; but the thiosulphate, a detrimental ingredient to the rubber manufacturer, is often present. The author came to the conclusion that it is the thiosulphate that is present, because the calcium found does not agree with the amount of sulphate present, nor does the amount of free sulphur extracted by carbon bisulphide agree with the amount of sulphur which is left after solution in hydrochloric acid, when it appears to increase, as if derivable from the chemical decomposition between the thiosulphate and sulphide. Referring to analytical methods, the author said it must be remembered that antimony chloride is perceptibly volatile, solution should be effected over a reflux condenser, and that sulphuretted hydrogen should be eliminated before dilution, or grave error arises. Rochelle salt is recommended at this stage, and the antimony can be estimated with fairly uniform results by volumetric alkaline solution of iodine. The determination of oxide by the potassium acid tartrate process should be conducted slowly, and the filtered solution should be titrated in a similar way. The method of obtaining total sulphur may be by the alkaline method or the acid method, but it is greatly to be desired that some more agreeable method could be adopted than the use of fuming nitric acid or even the 1.42 acid with bromine. The author has tried, with some measure of success, passing chlorine gas through a warm alkaline solution of antimonium sulphuratum in caustic potash (free from sulphate), with subsequent removal of the Sb_2O_5, washing with solution of ammonium chloride, as previously suggested; but the last traces of free sulphur require some patience to thoroughly oxidise. It was pointed out that in the B.P. process (Tilden's) the fact that nothing should be yielded to water, which would exclude sodium and calcium sulphate, is omitted, and the test vitiated. When sulphurated antimony is dissolved in warm caustic potash or soda a black residue of iron sulphide is frequently observed. Traces of silica (as sand) may also be noted at this stage.

Determination of Antimony in its Sulphide Preparations.

By David Lloyd Howard and J. Bristowe P. Harrison, F.I.C.

The authors called attention, at the Manchester Conference (*C. & D.*, July 27, 1907, p. 186), to the presence of non-oxidisable substances in antimonium sulphuratum which may cause an error in the official test. They now submit a rapid assay process for antimony sulphides which can be carried out more rapidly and easier than the gravimetric process. Substantially it consists in fusing the sulphide of antimony with sodium peroxide, whereby the antimony is converted into sodium metantimonate, which, after bringing into solution and reducing to the lower state of oxidation, is determined volumetrically by means of standard iodine solution. The sulphur, which is thus oxidised to sulphuric acid, is determined by precipitation as barium sulphate. The following are details for each substance :

Antimonium Sulphuratum and Golden Sulphides of Antimony.—About 0.5 gram of the substance is weighed into a nickel crucible of about 60 c.c. capacity and intimately mixed with 4 grams of pure anhydrous sodium carbonate; 4 grams of sodium peroxide is now added, again mixing thoroughly, and the whole covered with a thin layer of sodium peroxide. The sodium carbonate is added as a diluent, for if the peroxide alone is used in the presence of much free sulphur, deflagration invariably takes place, owing to the rapidity of the reaction, with consequent loss of substance. The covered crucible is then cautiously heated by means of a very small Bunsen flame, which, after the reaction has commenced, is increased sufficiently to bring the whole contents of the crucible into a homogeneous molten condition. The mass is kept in a state of fusion for a few minutes longer and allowed to cool. Any fusion-splashings on the lid are now washed into a convenient-sized beaker, with sufficient water just to cover the bottom of the beaker. The crucible, after placing in the beaker, is filled up with hot water and the whole digested on a water-bath until all effervescence has ceased, when the melt will be found to have become entirely detached. The crucible is then well washed and removed from the beaker, keeping the volume of wash-water as low as possible. To the contents of the beaker are now added 25 c.c. of concentrated hydrochloric acid to roughly neutralise the soda, and afterwards about another 15 c.c. of acid to bring the antimony into solution, and the whole is allowed to digest with occasional shaking until the solution becomes almost clear. It is scarcely necessary to add that the beaker should be covered with a clock-glass in all these operations to avoid loss by spurting. The contents of the beaker are then heated over a Bunsen flame until the solution is perfectly clear and bright, and until all free chlorine has been expelled. After cooling the solution is made up to a known volume (say, 250 c.c.).

Black Sulphide of Antimony.—The procedure is exactly the same, except that only 3 grams each of sodium carbonate and peroxide are necessary per 0.5 gram of substance. As no free sulphur is present in this substance the liability to deflagration is here practically nil.

Antimony Determination.—100 c.c. of the solution (equal to 0.2 gram of substance) thus obtained is reduced to the antimonious state by the addition of about 1 gram of powdered potassium metabisulphite, and gently boiling the whole until all trace of sulphur dioxide has been removed. A few drops of phenolphthalein indicator are added, and fairly strong caustic-soda solution until a permanent pink coloration is obtained, and finally solution of tartaric acid until the precipitate formed is redissolved. After cooling thoroughly about 3 grams of solid sodium bicarbonate is added, and the antimony estimated by titration with decinormal iodine solution: 1 c.c. decinormal iodine = 0.006 gram antimony.

Sulphur Determination.—50 c.c. of the clear are heated to boiling and precipitated with excess of barium-choride solution in the usual manner. The reagents used should, of course, be tested for sulphur, which, if present, should be allowed for.

The following results were obtained, using the methods of procedure described :

—	Black Sulphide of Antimony, Commercial	Antimonium Sulphuratum, Laboratory Preparation	Antimonium Sulphuratum, Manufactured Product	Antimonium Sulphuratum, Sample "A"	Antimonium Sulphuratum, Sample "B"
Antimony	69.30 %	33.90 %	39.54 %	36·25 %	20·85 %
Sulphur...	27.34 % (27.72 theoretical)	64.13 %	58.22 %	58·62 %	39·13 %
Combined antimony and sulphur	—	98.03 %	97.76 %	94·87 %	59·98 %

"A" and "B" were the 1907 preparations from two manufacturers. The manufactured sample gave 5½ per cent. more antimony than the laboratory preparation, and the authors explained that it is often easier to obtain a more ideal product on a large scale than on a small one. It has to be noted that heating to "redness" over a Bunsen flame does not get rid of the last traces of sulphuric acid : strong ignition over the blowpipe or in a muffle furnace is necessary. Sample "B" contained a large percentage of sodium sulphate, and otherwise had not been prepared by the official method. As a result of the present and former work, the authors concluded that the antimony figure is the only reliable basis in forming an opinion as to the genuineness of manufactured sulphide preparations, and they suggested that antimonium sulphuratum should never contain less than 30 per cent., and that the combined antimony and sulphur should form at least 95 per cent. of the whole product.

Discussion.

Mr. Tyrer congratulated Mr. Howard on the excellence of his paper, and remarked that the method he had outlined was comparatively easy. As far as practical and expert information was concerned it only required ordinary care.

Mr. Branson thought that a high power Bunsen burner would be very convenient for the work, as it gave a very white heat.

Mr. Alcock thought the suggestion as to dilution a very excellent one. He desired, however, to caution the authors of the paper with regard to the use of a Bunsen flame. They all knew that there was a large amount of sulphur present in gas. This fact should not be minimised. When they put the crucible over the Bunsen burner care should be taken

to wipe its bottom. Any pharmacist who failed to observe this rule would never do for him as a dispenser. The authors did not tell them what kind of lid they would use for the crucible. He presumed it would be nickel. If this were so he feared the method suggested by Mr. Branson would play sad havoc with the nickel. He was very glad to find that the gentlemen had agreed to the volumetrical method. He was quite sure there would be no difficulty in having it adopted as the official method. He thought that a little chlorine was desirable in dealing with these things.

Mr. Rutherford Hill, Edinburgh, referred to experiments he had personally carried out on the method of oxidising, and stated that the process for estimating the liquor antimonii volumetrically worked very well indeed.

Mr. Gadd's "Poisons" Table.

Substance	Preparations brought into Part 2 by the general clause at the end thereof	Admixtures brought into Part 2 by the general clause at the end thereof
Belladonna ...	Tincture, plaster	—
Cantharides ...	—	Ointment Cantharides plaster Warming plaster
Corrosive sublimate	Solution	—
Nux vomica and strychnine	Easton's syrup	—
Opium and morphine	Tincture of opium Ammoniated tincture of opium Compound tincture of camphor Liquid extract of opium Liniment of opium Solution of morphine acetate Solution of morphine hydrochloride Solution of morphine tartrate	Ointment of galls with opium Compound lead suppositories Compound kino powder Aromatic powder of chalk with opium Ipecacuanha pill with squill Morphine lozenges Morphine and ipecacuanha lozenges
Chloral hydrate	Syrup of chloral hydrate	—
Digatalis	Infusion of digitalis Tincture of digitalis	—
Mercuric iodide...	—	Ointment of red iodide of mercury
Red precipitate and all oxides of mercury	—	Yellow oxide of mercury ointment Red oxide of mercury ointment
White precipitate	—	White precipitate ointment
Strophanthus ...	Extract of strophanthus Tincture of strophanthus	—
All poisonous vegetable alkaloids and their salts	Extract of colchicum Extract of hyoscyamus Extract of Calabar bean Extract of stramonium Liquid extract of ipecacuanha Liquid extract of jaborandi Hypodermic injection of apomorphine Ipecacuanha lozenges Tincture of colchicum seeds Tincture of conium Tincture of gelseminum Tincture of hyoscyamus Ethereal tincture of lobelia Tincture of stramonium Belladonna juice Hemlock juice Hyoscyamus juice Scoparius juice Hemlock ointment Colocynth and hyoscyamus pills Vinegar of ipecacuanha Colchicum wine Ipecacuanha wine	Homatropine discs (dannellae) Physostigmine discs (dannellae) Stavesacre ointment Veratrine ointment

Concerning Qualitative Determination of Free Salicylic Acid in Bismuth Salicylate.

By J. Bristowe P. Harrison, F.I.C.

After dealing with the exceptions taken to his Aberdeen Conference paper (*C. & D.*, 1908, II., p. 472) by Mr. W. Lyon, the author pointed out that the ether used in the test should be pure, æther purificatus (s.g. 0.720) from methylated spirit being preferable to ordinary methylated ether (0.720). He also described in detail precautions which should be taken in evaporating the ethereal solution, and proved by figures that such traces of salicylic acid as 0.00025 to 0.001 grain are recoverable by the process. For the colorimetric determination of salicylic acid an aqueous solution prepared by diluting 1 c.c. of liq. ferri perchlor. fort., B.P., with water to 100 c.c. is convenient, one drop being usually sufficient to combine with the acid yielded by 1 gram of bismuth salicylate. Three drops of the solution will bring out the full colour from 1 mgm. of salicylic acid. Nessler glasses (50 c.c.) are convenient for the determinations, but the solutions should not contain more than 2 mgms. per 100 c.c. of solution if reliable results are to be obtained. Artificial mixtures of bismuth salicylate with known amounts of salicylic acid yielded after one extraction of 1 gram of the mixture with 10 c.c. of ether (0.720) approximately half of the added acid. Results with other solvents were detailed, and the following are the conclusions deducible from the research :

The amount of decomposition with ether is constant, as shown in the second and third extractions.

Decomposition occurs with all the solvents except ether and chloroform.

Acetone and acetic ether yielded in two extractions considerably more salicylic acid than was added.

Petroleum ether is a poor solvent.

No result is recorded for the benzol extraction owing to the difficulty of removing the solvent, but the author surmises that the amount yielded would be equal to that given by the first extraction with petroleum ether (0.006 gram).

The combined chloroformic extractions are exactly equal to the amount of salicylic acid added, which disproves the statements regarding the unsuitability of this solvent.

Ether and chloroform are undoubtedly the most suitable solvents. Ether, although decomposing bismuth salicylate to a greater extent than chloroform, requires only one-third of the time for extraction, and the decomposition can be corrected for as the amount is constant. The following table gives results obtained by extractions of three hours' duration on 10 grams of the salt in a Soxhlet apparatus, shaking out the acid from the solvent into standard alkali, and colorimetrically determining the salicylic acid in the usual way after careful neutralisation to litmus :

Solvent	Sample	First Extraction	Second Extraction	Third Extraction
Ether... ...	0·1 % added acid	0·0385	0·0028	0·0028
Chloroform ...	Do.	0·0362	0·0032	0·0015
Ether... ...	C	0·1120	0·0100	0·0035
Ether... ...	A	0·6810	0·8140	0·0000
Ether... ...	B	0·4400	0·2590	0·2240

The results lead to the conclusion that at least two distinct products are on the market as bismuth salicylate—one approximating to true bismuth salicylate and the other a more or less loose combination of the acid and base, in which case the determination of free acid is of extreme difficulty. In view of the remarks of Cushney in his work on "Pharmacology and Therapeutics," it would appear that if the antiseptic properties of salicylic acid are meant to be developed in the bowel rather than in the stomach a bismuth salicylate that is not readily decomposed possesses a therapeutic advantage. If, on the other hand, it is immaterial, why all the fuss about the relatively small quantities of free salicylic acid which are often found in this compound? The work was carried out in the laboratories of Messrs. Howards & Sons.

Mr. Harrison's paper was read by Mr. Howard.

Discussion.

Mr. Tyrer described the paper as a very complete research of the subject, and as one which would do immense credit to the Conference on the side of utility. He took exception, however, to Mr. Howard's conclusions on the subject of ether. Last year Mr. Howard, in replying to Mr. Rutherford Hill, stated that it was necessary that methylated ether should be pure provided it was really 720. This was a matter on which the pharmacist might be misled and the manufacturer submitted to injustice. It was very rare indeed in ordinary commerce and in ordinary work for ether to be described in the decisive words used by Mr. Howard.

Dr. Coull said travellers often speak of the uncompromising purity of the products they sell. It was satisfactory to hear men like Mr. Tyrer and Mr. Howard cry "halt" when a stage is reached which, whilst adding to the cost of an article, does not increase its utility.

The President said the lesson seemed to be not to use the ordinary ether of the shop, but something even purer. He asked whether chloroform, which is easily obtainable in a state of purity, would not do in place of ether.

Mr. Howard, replying, repeated the injunction to employ ether puriss. and not ordinary .729 ether. In regard to Dr. Coull's remarks he (the speaker) preferred to leave it to the expert in therapeutics to say if the additional cost of the extra purity is justified. Chloroform is slower in action than ether.

Unguentum Paraffini.

By J. H. Franklin, Ph.C.

Probably no ointment introduced into recent Pharmacopœias has given so much dissatisfaction as the paraffin ointment now official. Suggestions which have been made for improving it are usually troublesome, and the resulting product still unsatisfactory. Imperfect blending of the two ingredients appears to be the source of the trouble, for while any quantity of hard paraffin up to about 12 per cent. mixes fairly well with petroleum jelly, over this percentage the well-known curdy and granular character appears and becomes much more marked as it approaches the proportion recommended in the British Pharmacopœia. The higher percentages of paraffin-wax (over 12-15 per cent.) do not give increase of consistency corresponding with the increased proportion of the harder substance. One is compelled to conclude that paraffin is not a suitable hardening-agent to produce an ointment-basis with the necessary body. The experiments here recorded constitute an attempt to supply the want expressed in the Conference Research List for an improved basis to replace ung. paraffini, B.P. The author has prepared four series of ointments by adding to white petroleum jelly varying proportions (5, 10, 15, and 20 per cent. respectively) of one of the following hardening-agents :

Paraffin wax, m.p. 120° F.
Paraffin wax, m.p. 130° F.
Paraffin wax, m.p. 140° F.
White beeswax.
Commercial bleached ceresin.
Pure bleached ceresin.
Commercial bleached carnauba wax.
Pure yellow carnauba wax.

The author prepared a series of ointments, and the following deductions were submitted :

Five-per-Cent. Series.—It was not expected that an entirely satisfactory ointment would be produced. The results show that ceresin is better than paraffin and that bleached carnauba is superior to both. Paraffin is the most unsatisfactory of all the agents. The bleached carnauba ointment is the smoothest, whitest, and firmest of the series.

Ten-per-Cent. Series.—The results of the above series were confirmed.

Fifteen-per-Cent. Series.—The paraffin ointments are difficult to stir down, while in contrast the ceresin and bleached carnauba preparation stirred down fairly easily. The latter were all good ointments, being firmer, whiter and smoother than any previous formula. The carnauba-wax ointment was again the best of them. The yellow carnauba-wax ointment contained hard particles, and was abandoned.

Twenty-per-Cent. Series.—The ointments generally are not equal to the 15-per-cent. series. The preparations made with ceresin or bleached carnauba exhibited little difference from each other, but the ointment made with commercial bleached ceresin is probably the best in the series.

The ceresin and bleached carnauba ointments prepared with 20 per cent. of hardening-agent were not so firm as the corresponding ointments made with 15 per cent. The explanation offered is that when the two substances cease to blend a less homogeneous product is formed, with consequent loss of body. All the above experiments were conducted on 5-oz. quantities. Batches of 100 oz. were prepared by adding 10, 12½, 15½, or 17½ oz. of pure bleached ceresin, or with similar amounts of commercial bleached carnauba wax, to the requisite amount of white petroleum jelly to select the exact formula, and also to ascertain if a larger batch could be cooled by artificial means. The conditions were made as identical as possible. The lower proportions (10-12½ per cent.) give rather soft products, while the ointments with the higher proportions (15-17½ per cent.) make excellent substitutes for ung. paraffini, B.P., with the exception of the 17½ per cent. carnauba ointment, which is slightly granular. Unfortunately, pure bleached carnauba wax is not on the market, thus enforcing the use of the commercial product. The formula with 15 per cent. of commercial carnauba wax gives an ideal, white, firm, smooth, plastic, and homogeneous ointment, which is readily spread on lint with a spatula. It complies with everything that is desired for paraffin ointment. It keeps well, showing no sign of separation within eighteen months. Moreover, it can be cooled by artificial means—a very important point. The author is reluctant to recommend the use of carnauba wax owing to the irregularity in composition of the commercial product. After experiments with various mixtures the following alternative formulæ are suggested to replace the unsatisfactory official ointment :

A.	Parts	B.	Parts
White petroleum jelly ...	85	White petroleum jelly ...	82
Pure bleached ceresin ...	15	Paraffin wax, m.p. 130° F.	8
		Pure bleached ceresin ...	10

Melt the ingredients together and strain if necessary. Allow to cool, then stir constantly until cold, stirring briskly at the end.

Both of the selected formulæ give perfectly satisfactory preparations with all the good qualities enumerated above of the carnauba-wax ointment, but not to such a marked degree. B is the whiter basis, but A is to be preferred, since it is smoother and not so greasy on the skin. Either ointment can be thoroughly recommended. The author acknowledged the assistance of Mr. H. Ridgway, of Messrs. J. Woolley, Sons & Co.'s laboratories.

Discussion.

Mr. Alcock was thankful that the author did not suggest squeezing the ointment through muslin. He mentioned that a dairy company uses a powerful straining machine to prevent the formation of lumps of fat when making separated milk. Could the author say why the Pharmacopœia refers to ung. paraffin as "plastic"? No other ointment is referred to in this manner. Mr. Alcock added that by continued heat the melting-point of paraffin wax can be much lowered, and he also called attention to the dissimilarity of hard and soft paraffin as regards their sources.

Dr. Symes could not agree that carnauba wax is frequently adulterated. The natural product varies much in colour. He had found the addition of 5 per cent. of it to cacao-butter desirable when making suppositories in summer. There is a wide range of usefulness for carnauba wax, which perhaps accounts for the increase in price of recent years.

Mr. Finnemore said the paper was important, as paraffin-ointment is fundamental. Although carnauba wax is not pure that state could be brought about by the inclusion of it in the Pharmacopœia.

Mr. Naylor added that if there were any demand for pure carnauba wax it would soon be met. The yellow variety is the only kind in demand. It is used for a particular purpose. He referred to the new machines which force ointments through minute holes and give very beautiful ointments for pharmaceutical purposes. He asked if the ointments retained their original consistence and melting-point on being kept?

Mr. White said the two paraffins are not similar bodies; there is a wide gap between the points of distillation at which they are obtained. Manufacturers could, if they wished, break down hard paraffins and make a homogenous product. A soft paraffin of higher melting point can be obtained which conforms to the condition referred to by the author.

Mr. Franklin, in replying, suggested that the Pharmacopœia requires paraffin ointment to be plastic so that it would the better act as a protective to wounds. Ceresin of a different melting point could be used, if allowance is made in the formula. Carnauba wax is not adulterated, it is diluted, so as to give it the white form desired in the candle industry. He had kept the ointment for two years without separation.

Fluid Extract of Cascara Sagrada.

By Charles Symes, Ph.D.

The instructions of the British Pharmacopœia in regard to this preparation are exceedingly simple. The bark, in No. 20 powder, is macerated during six hours with distilled water, then percolated with the same menstruum until exhausted; the percolate is evaporated and finally made up to a given bulk with dilute alcohol. The point of exhaustion is usually determined by the absence of bitterness in the percolate. In practice we use chloroform-water instead of plain water, to avoid any tendency to fermentation, and allow the maceration to continue for at least twelve hours before starting percolation. In working

a small batch of 28 lb. of bark, it occurred to the author that when bitterness of the percolate had ceased, the addition of ammonia to a further portion of the menstruum may be the means of obtaining a further yield of extract possessing medicinal value. Accordingly, to a further 2 gals. of chloroform-water, 10 oz. of liq. ammoniæ, B.P., was added and percolation continued. The percolate was collected separately from that previously obtained, and when evaporated to 16 fl. oz. it yielded a fluid extract which possessed distinct aperient properties. To the first percolate two pints of glycerin was added during the process of evaporation, and this latter extract was added to the resultant product before adding the dilute alcohol to make up the quantity to 28 fl. lb. On repeating the process at a subsequent date similarly satisfactory results were obtained. Cascara sagrada, like all natural products, varies to some extent in character and activity, but, given two samples of fluid extract prepared from two portions of the same grinding of bark, the preparation resulting from the process here indicated possesses greater activity and represents more completely the medicinal constituents of the bark than that obtained by the B.P. process. Long contact with an alkali is known to reduce the bitterness and also the activity of cascara sagrada, and for this reason the author thinks it advisable to use ammonia from the commencement of the process.

DISCUSSION.

Mr. ALCOCK gently chaffed Dr. Symes at using ammonia and chloroform in a pharmacopœial article when they are not ordered. All sorts of alkaline hydroxides have been suggested in the manufacture of cascara extract, but he would like to see a return to the old hydrogen hydroxide in making galenicals of such drugs as rhubarb, senna, and cascara.

Dr. SYMES replied that no ammonia nor chloroform remains in the finished product. He had found that ammonia water gives a further amount of extractive not destitute of medicinal properties although less bitter, and he considered that any gain in the amount of medicinal extractive is desirable. Activity tests are not, however, always conclusive unless made systematically.

Cacao Butters and Cacao-butter Substitutes.

By W. B. COWIE, Ph.C., F.C.S., and B. M. BRANDER.

DURING the past year the authors have examined two cacao-butter substitutes, one so skilfully prepared that it answered most of the tests for genuine cacao butter, while the other might have been rejected on any single test. The authors compared these substitutes with a genuine cacao butter and one prepared from cacao husk.

Björklund's ether test was used as a preliminary, and the results obtained are :

	Cooled to 0° C. for Three Minutes	Clear at degrees C.
1. Genuine cacao butter	No deposit	15
2. Husk cacao butter	No deposit	14
3. Hard cacao-butter substitute	Flaky deposit	15
4. Soft cacao-butter substitute ...	Slight deposit	21 (still cloudy)

These results indicate that No. 3 contains some bodies of a relatively high melting-point, and that No. 4 probably contains animal fats.

The following table contains the results of the various determinations carried out :

	Melting-point in degrees C.	Refractive Index at 40° C.	Acid Value	Saponif. Value	Iodine Value	Reichert-Meissl Value (c.c. N/10 KOH)
1. Genuine cacao butter	32.2-33.3	1.4565	1.4	195	33.2	0.2
2. Husk cacao butter ...	30.6-31.1	1.4570	7.8	197	35.3	0.6
3. Hard cacao-butter substitute	36-37	1.4571	0.7	194	33.4	0.5
4. Soft cacao butter substitute	30.5-31.1	1.4520	0.7	219	8.5	3.3

The numbers obtained with genuine cacao butter are well within the recognised standards, and, as might be expected, the husk butter has a low melting-point, probably due to its having been extracted with a solvent, and probably for the same reason its acid value is high : the other numbers are higher than those of the genuine cacao butter, but are still within the standards.

In the case of No. 3, which is a hard cacao butter substitute, it is most remarkable that all the numbers obtained in the range of tests are within the standard figures, except the Bjorklund ether test. In the case of No. 4, which is a soft cacao-butter substitute, all the numbers are normal, except the Björklund ether test.

The free fatty acids were prepared from the samples and their melting-points and refractive indices determined.

DISCUSSION.

Mr. NAYLOR said the moral of the paper was that it is utterly absurd to attempt to fix the purity of an article by means of single physical tests; larger data should be given in the Pharmacopœia.

Refractometric Examination of Galenical Preparations.

By W. B. COWIE, Ph.C., F.C.S., and T. O. BROADBENT

IN the determination of the extractive matter in galenical preparations the first question that occurs is, What proof is there that the extractive obtained is free from extraneous matter? This question is difficult; in fact, practically unanswerable. It occurred to one of the authors that the determination of the refractive index of such substances would be useful for the detection of adulteration. Fluid extract of cascara was chosen for the purpose of experiment, an extract being prepared strictly according to the method published in the report of the Reference Committee in Pharmacy to the Pharmacopœia Committee. Several samples of well-known commercial fluid extracts were also obtained, and the specific gravity, alcohol, extractive and refractive index of each were determined. For the determination of the refractive index 10 c.c. of the extract is evaporated to one-half, cooled, 2 c.c. of alcohol (90 per cent.) added, and made up to the original volume at 15.5° C. with water. Five cubic centimetres is now diluted to 25 c.c. with 22.5 per cent. alcohol at 15.5° C. The diluted extract is now ready for placing in the refractometer. A 1-in-5 dilution works best, but this depends upon the depth of colour in the extractive. Abbe's refractometer was used. The results obtained are :

Samples.	Sp. Gr. at 15.5° C.	Extractive at 100° C. %, w/v.	Alcohol by vol. %	Refractive Index at 20° C.
No. 1 Standard, (own make	1.070	25.8	22.5	1.3486
,, 2	1.077	31.0	27.8	1.3565
,, 3	1.064	22.7	17.17	1.3433
,, 4	1.202	25.8	Nil	1.3670 Glycerin 2%
,, 5	1.130	—	Nil	1.3561 Glycerin

It will be seen that the refractive index of each agrees with the specific gravity and amount of extractive.

DISCUSSION.

Mr. NAYLOR characterised this paper as extremely suggestive and on entirely new lines. We really do not know, he said, when we have evaporated a solution in what form we have got the solid matter. It may be in a very different condition to that in which it existed in the drug.

A Preliminary Examination of Euphorbia Pilulifera

By J. STABLEFORD HILL, Ph.C.

THE author reported that he found 8 per cent. moisture (average of three assays) : ash (on two samples), (*a*) 8.5 per cent., (*b*) 8.2 per cent. For alkaloid 20 grams of the drug in fine powder was exhausted with Prollius' fluid. The solution, after evaporating to low bulk, was treated with water acidulated with sulphuric acid. The filtered acid solution was then washed in ether, rendered alkaline with sodium hydrate, and shaken out with a mixture of ether (3 parts) and chloroform (1 part). The residue obtained on evaporation of the ethereal solution was dissolved in 20 c.c. of 0.2 per cent. sulphuric acid solution and portions tested with the usual alkaloidal reagents.

Both Thresh's reagent and Mayer's reagent yielded characteristic precipitates.

Examination with Different Solvents.—Ten grams of the finely powdered drug was extracted in a Soxhlet apparatus with the following solvents in the order named: Petroleum spirit (b.p. below 45° C.), dry ether (sp. gr. 0.717), chloroform, acetic ether, and absolute alcohol. The percentage of dry extractive yielded to each solvent, calculated upon the dry weight of the drug, was as follows: Petroleum 1.67, ether 1.67, chloroform 0.58, acetic ether 2.66, and absolute alcohol 11.15; total, 17.73.

For a more thorough examination a kilogram of the powdered drug was percolated slowly with 90-per-cent. alcohol to produce 10 litres of finished tincture. By evaporating 100 c.c. of the tincture, it was found that 12 per cent. of the drug, calculated as dry, was soluble in 90-per-cent. alcohol. After removing the alcohol from the remainder of the tincture by evaporation, the residue was thrown into a large quantity of water, and the soft, sticky, resinous mass of dark-green colour which separated was filtered off and washed. The residue obtained from a portion of the filtrate showed that 56.3 per cent. of the alcoholic extractive was soluble in water. The aqueous solution gave positive tests for tannic acid with solutions of ferric chloride and lead acetate. The aqueous solution was reserved for further examination.

The resinous mass was dried over strong sulphuric acid in an exhausted desiccator, and 35 grams mixed with fine sawdust (previously extracted with petroleum, absolute alcohol, and water).

	Gram	Per cent.
I. Petroleum ether	23.23	66.37
II. Dry ether (0.717)	4.02	11.48
III. Chloroform	1.54	4.40
IV. Acetic ether	1.12	3.20
V. Absolute alcohol	3.33	9.51
Total	33.24	94.96

Residue No. I. was a dark-green viscous liquid, evidently containing much chlorophyll. Nos. II., III., and IV. were brittle, green, and resinous. No. V. was a brown resin. Further examination of these extracts is in progress. The marc left after percolation with 90-per-cent. alcohol was dried and percolated slowly with cold water until the percolate was almost colourless. This percolate is also reserved for further examination. The results of the examination so far indicate the presence of a small quantity of alkaloid, tannic acid, a waxy substance, several resins, but no volatile oil. The author hopes to report later upon the nature of these substances.

Note on the Separation of Strychnine from Brucine.

By G. Pinchbeck, F.C.S.

Since the adoption of Gordin's modification (*C. & D.*, 1902, II., 607) of Keller's nitric-acid process for the assay of strychnine in nux vomica and its preparations in the United States Pharmacopœia Notes by Mann ("Southall's Laboratory Report," 1906, p. 31), Wright and Farr (*C. & D.*, 1906, II., 170) and other workers show that the reagent has little action on the brucine if prescribed conditions are adhered to rigidly. For comparative purposes the results obtained by various workers using the U.S.P. process are tabulated below:

Investigator	Alkaloid Taken	Alkaloid Recovered	Remarks
Wright and Farr ...	Brucine, 0.084	0.0767	—
Pinchbeck *	Brucine, 0.075	0.0695	Characteristic red colour feebly developed
Mann	Brucine, 0.05 Strychnine, 0.05	Strychnine (?) 0.098	Ditto

* Colourless acid (B.P.) was only used in this experiment.

The author considers that the variable colour-effect produced by nitric acid on brucine at ordinary temperatures is due in no small measure to the amount of dilution and also to the proportion of hyponitric acid (nitrogen peroxide) present. Reynolds and Sutcliffe ("J.S.C.," I., 1906, 25, p. 512) have shown that a solution of nitric acid (50 grams per 100 c.c.) free from traces of nitrous acid did not act on brucine even on standing for several hours. The addition of 0.005 gram of sodium nitrite causes complete destruction of the brucine within ten minutes. The action of nitrous acid may be compared to the trace of water-vapour essential to the explosive combination of some gases. Webster and Purcell ("Amer. J. Pharm.," 1907, 79, p. 1) propose to modify the U.S.P. assay by the addition of a little sodium nitrite, and recently Lyons ("Amer. Drug.," March 8, 1909) has suggested the addition of a little cane-sugar with the same object in view. The solution prepared by diluting commercial fuming nitric acid with commercial white nitric acid in such proportion as to contain 1 per cent. of nitrogen peroxide and not less than 70 per cent. of the real nitric acid has yielded excellent results in the author's hands. The depth of the colour, which may be taken as an indication of the rate of oxidation, is developed to a greater degree than ordinarily in all probability due to the nascent nitrous acid produced by the partial hydrolysis of the nitrogen peroxide. The following results were obtained by subjecting the weighed alkaloid, or alkaloids to the process described below:

Alkaloid Taken	Alkaloid Recovered.
A—Brucine, 0.219	A—0.0018
B— ,, 0.0841	B—0.0006
A—Strychnine, 0.3455	A—0.3455
B— ,, 0.0388	B—0.0387
A— Brucine, 0.0286; Strychnine, 0.0164	A—0.0168
B— Brucine, 0.0982; Strychnine, 0.0352	B—0.0359

The residues from the brucine experiments were strongly coloured and gave no characteristic reaction for either alkaloid. When either ammonia or sodium carbonate was used as alkalising agent the amount of residue obtained from the brucine chloroformic extract was greater than when sodium hydroxide was employed. In assay experiments on nux vomica and its preparations the total alkaloids obtained in the usual way, from 2 grams of the drug, 5 c.c. of the liquid extract, or 25 c.c. of the tincture, were treated as follows:

> Dissolve alkaloids in 15 c.c. of 3-per-cent. sulphuric acid on a water-bath, cool to 25° C., and add 1.5 c.c. of fuming nitric acid (s.g. 1.435) containing 1 per cent. nitrogen peroxide. The mixture is set aside for fifteen minutes and stirred occasionally. Transfer the mixture to a separator, add excess of 10-per-cent. solution of sodium hydroxide and 10 c.c. of chloroform, shake well, and after separation draw off the chloroform into another separator. The extraction is repeated with two further quantities of 5 c.c. of chloroform. The bulked chloroform extracts are washed with 2-per-cent. sodium-hydroxide solution and then transferred to a tared wide-mouthed flask. The chloroform is distilled off until the residue measures about 1 c.c., to which 2 c.c. of amylic alcohol is then added and the alkaloidal solution evaporated down in a current of warm air. Finally, cover the mouth of the flask with a loosely fitting cap of thin filter-paper and dry at 110° C. until the weight is constant.

The results were found to agree closely with those given by the process in the British Pharmacopœia as shown in the following table where the figures represent the percentages of strychnine:

Method	Modified U.S.P.	B.P.
Drug	A. 1.152 B. 0.957	A. 1.145 B. 0.944
Extract	A. 8.47 B. 6.38	A. 8.45 B. 6.38
Tincture	A. 0.258	A. 0.2574

The points which require particular attention during the assay are :

1. The oxidation should not be allowed to proceed beyond the time indicated, otherwise loss of strychnine will occur.
2. The strength of the fuming nitric acid should be adhered to.
3. The directions regarding the final drying of the alkaloid should be strictly observed to avoid loss of strychnine.

The author finds that on contact with the nitric acid recommended for use a loss of 14.75 per cent. of strychnine occurs in five hours and that 65.5 per cent. disappears in sixty-four hours. No difficulty should be experienced in finding commercial fuming nitric acid of suitable nitrogen peroxide content. The nitrogen peroxide is determined by running the acid into a measured quantity of semi-normal solution of potassium permanganate (kept at 40° C. until the pink colour just disappears. Each c.c. of permanganate solution is equivalent to 0.023 gram of nitrogen peroxide. The formula $\frac{2.300x}{ys}$, in which x=number of c.c. of permanganate, y=c.c. of acid, and s=specific gravity, gives the percentage, by weight, of nitrogen peroxide.

The U.S.P. assay process modified as proposed is capable of giving accurate results under conditions which, when compared with the technique involved and the time absorbed in working the ferrocyanide method or Gordon and Prescott's periodate process, are obviously not onerous to the worker.

The Use of Alcohol in Pharmacy.

By D. B. DOTT, F.R.S.E.

IN pharmacy alcohol is used as a solvent, as a preservative, and in some instances because of its volatility. There has been manifest a distinct tendency to reduce the proportion of it in spirituous preparations. Comparing the 1885 with the 1898 British Pharmacopœia, we find the amount in tinctures reduced from 72 to 65 per cent. and the liquid extracts increased from 12 to 17 per cent. Proof spirit was the weaker strength of alcohol used in the former Pharmacopœia, but the 1898 edition has several tinctures prepared with 45-per-cent. alcohol. The question arises, "Can the proportion of alcohol used in pharmaceutical preparations not be still further reduced without diminishing the medicinal valuo of the preparations?" The author thinks it may. Tinctures of orange, lavender (compound), lemon and podophyllin might be altered from 90 to 70 per cent. alcohol; tinctures of cascarilla cinchona, cinnamon, conium, and pyrethrum from 70 to 60 per cent.; tinctures of calumba, chiretta, saffron, digitalis, ergot, rhatany, hops, quillaia, squill, and senega from 60 to 45 per cent., and tinctures of aloes, cochineal, hyoscyamus, opium, quassia, and stramonium might be prepared with 30-per-cent. alcohol instead of 45-per-cent. Among the liquid extracts, belladonna should be reduced to 70-per-cent. alcohol (if the root be retained); cimicifuga and ipecacuanha also to 70-per-cent.; coca might be reduced to 45 or even 30 per cent. and would be more miscible; nux vomica is extracted sufficiently well with 60-per-cent. alcohol, which has the advantage of leaving the oil for the most part behind. According to the Pharmacopœia, there are eleven solid or semi-solid extracts which are prepared by extracting with alcohol of various strengths and distilling or evaporating. In general this must be regarded as wasteful. It is obvious that any solvent which dissolves out the active principles of the drugs, and which may be removed without too much heat, is suitable for the preparation of abstracts. Having obtained the concentrated extract, it is then only necessary to add the required amount of diluent to standardise. There is a growing tendency to make the extracts in powdery form, as being more convenient for dispensing, and securing greater uniformity of composition. Sugar of milk is not a good desiccating material, unless present in large proportion. Phosphate of lime is a favourite desiccant, but probably an inert soluble salt could be used in many cases with advantage. Glycerin is employed in a few instances, partly as a solvent and partly as a preservative. In concentrated extracts where the dose is small, as in fluid cascara sagrada, glycerin might more frequently replace the alcohol. For instance, liquid extract of ipecacuanha might be made up with glycerin instead of alcohol. The question of how far diluted a etic a id can replace alcohol as a solvent requires further investigation, but we have some very good testimony in its favour, as in the work of the Squibbs and others ("Year-book," 1898. 207. 1[illegible] 206, and 1900. 192). In the preparation of liniments, the use of methylated spirit might be authorised and extended. Acetone should be introduced as a solvent for other things besides pyroxylin. It dissolves many active principles such as cantharidin, and has the advantage over al[illegible] of being a solvent of fixed oils and fats.

DISCUSSION.

Mr. FINNEMORE, referring to this paper, said acetone reacts more readily than alcohol; he gave an instance where it was with ammonia in a hair-wash, and a deep yellow colour was obtained, which dyed the hair and skin. This was nothing to the deep purple that results on the addition of sulphuric acid. Iodine combines with acetone to give a most pungent substance, and acetone reacts with chloroform. These facts show that a long series of experiments would be needed before the limitations of the use of acetone as a solvent were accurately determined.

Mr. ALCOCK gave an example of a proprietary medicine which depends upon the alcohol it contains. The proprietor who wore a blue ribbon, tried to reduce the amount of alcohol, but the sale of the medicine dropped at once.

p-Hydroxyphenylethylamine, an Active Principle of Ergot, Soluble in Water.

By G. BARGER, M.A., D.Sc.

(From the Wellcome Physiological Research Laboratory.

THIS paper consisted of a summary of recent work on a new active principle of ergot. It was pointed out by Barger and Dale ("Biochem. Journ.," 1907, 2. 286) that the alkaloid ergotoxine (Barger and Carr, "Trans. Chem. Soc.," 1907, 91, 337), while being responsible for many of the characteristic effects of ergot, is only present in very small quantities in most specimens of the pharmacopœial preparations; such of these specimens as possess any appreciable activity were therefore regarded as containing a second active principle. Attempts to isolate this substance were for a long time unsuccessful. Vahlen ("Archiv. Exper. Path. Pharm.," 1906. 55. 131) seems also to have been aware of the existence of such a water-soluble principle, but his so-called "clavin" has been shown to be an inert mixture of amino-acids (Barger and Dale above). The physiological properties of *p*-hydroxyphenylethylamine, recently isolated from putrid meat by Barger and Walpole ("Journ. Phys.," 1909. 38. 343), suggested that this base might be the above-mentioned active principle of aqueous ergot-extracts. It has indeed, been possible to prove that *p*-hydroxyphenylethylamine occurs in such extract, and that the presence of this base accounts in a satisfactory manner for such of the activity as is not due to small quantities of ergotoxine (see Barger and Dale, "Proc. Physiol. Soc.," May 15, 1909). The method of isolation has recently been described in detail (Barger, *C. & D.*, May 29, p. 833), and was based on the fact that the active principle is both an amine and a phenol, and that it is moderately soluble in amyl alcohol, but only very slightly so in ether. A small quantity of crystalline dibenzoyl-*p*-hydroxyphenylethylamine was thus obtained from ergot. A convenient synthesis of *p*-hydroxyphenylethylamine is described in the paper. The base forms hexagonal leaflets, m.p. 161°, b.p. 161-163° at 2 Mm.; it is readily soluble in water, and furnishes crystalline salts; the free base gives Millon's reaction. The physiological properties of *p*-hydroxyphenylethylamine will shortly be described in detail by Drs. H. H. Dale and W. E. Dixon; its action on the uterus and blood-pressure is similar to that of adrenalin. $(OH)_2.C_6H_3.CH(OH).CH_2.NH.OH$, to which the substance from ergot is also related chemically. Weight for weight, *p*-hydroxyphenylethylamine is less active than adrenalin, but the effect is more prolonged; the substance is also much less toxic than adrenalin. The amount of *p*-hydroxyphenylethylamine present in ergot cannot be estimated by chemical means, but on physiological grounds it would appear to be of the order of 0.1 to 0.01 per cent. The question, whether *p*-hydroxyphenylethylamine occurs as such in ergot, or is only formed by bacterial action in the process of extraction is at present undecided; it is most probable, however, that the base is a result

of the normal metabolism of the living fungus, like cadaverine and putrescine, two "putrefactive" bases isolated from ergot by Rieländer ("Sitzber. Gesell. Naturw. Marburg," 1908, No. 27).

Malt Extract with Cod-liver Oil.

By E. F. Harrison, B.Sc., F.I.C., Ph.C.

The author gave the results of the examination of nineteen specimens of malt extract with cod-liver oil, which comprised nine products of particular brands—four supplied by large retail drug-store companies as their own, and six supplied ready packed for retail pharmacists. The quantity of oil was determined by mixing a known weight of the preparation with water, adding excess of hydrochloric acid to break the emulsion, and shaking with successive quantities of petroleum ether until no more oil was removed. The required number of treatments with petroleum ether varied much in different cases. The solution of oil was distilled to small bulk, transferred to a tared dish, evaporation completed, and the oil dried in a water-oven. The process was found to be quite satisfactory. After ascertaining the percentages of oil, a known weight of each preparation was mixed with a known quantity of water and the oil removed by shaking with petroleum ether in large quantity; no acid was added in this case and a much longer time was necessary for the separation of the liquids. In this way was obtained an aqueous solution, of known strength, of the extract contained in each preparation, and this was used for determining the maltose and the diastatic power. The former was found by titration into Fehling's solution and the whole of the reducing sugar found was calculated as maltose. The diastatic strength was found by the author's method ("P.J.," 1909, I., 390) briefly as follows:

Prepare a mucilage with water containing 1 gram of anhydrous potato starch in 80 c.c., cool to 46° C., and add to this 0.2 gram of malt extract dissolved in 20 c.c. of cold water. Keep at 40° C. for half an hour, then stop conversion by boiling. After cooling and adjusting the volume to 100 c.c. the maltose is determined in this solution by titration, and the diastatic power, expressed as percentage of starch converted, is arrived at by the use of the following formula:

$$\text{Diastatic value} = 592 \left(\frac{8.05}{n} - \frac{1.61}{m} \right)$$

where n is the number of c.c. of the solution, after digestion, etc., required to reduce 10 c.c. of Fehling's solution, and m is the number of c.c. of 1 per cent. solution of the extract alone required to perform the same reduction. If only half quantity (0.1) of extract is used (which is desirable in a repeat experiment when the diastatic value is found to be over 250) the formula becomes—

$$\text{Diastatic value} = 2 \times 592 \left(\frac{8.05}{n} - \frac{1.61}{2m} \right)$$

If one-fourth quantity (0.05) is used (in the repeat experiment with extracts over 750 diastatic power) the formula used is—

$$\text{Diastatic value} = 4 \times 592 \left(\frac{8.05}{n} - \frac{1.61}{4m} \right)$$

The following are the results obtained:

No.	Percentage of Oil (by weight).	Diastatic Value of Extract.	Maltose Percentage in Extract.
1	33.8	680	59.4
2	15.5	776	60.0
3	17.4	5	53.6
4	3.6	87	60.0
5	22.3	413	55.9
6	4.7	335	75.2
7	14.7	29	62.4
8	30.5	129	54.4
9	3.7	172	67.7
10	6.2	31	55.9
11	2.1	104	69.1
12	5.7	10	65.4
13	10.1	17	57.9
14	6.8	43	59.2
15	5.7	150	71.2
16	7.5	59	63.7
17	10.3	15	60.0
18	8.6	21	72.9
19	1.5	9	60.5

Comparative Examination of the Halogen Absorption of Oils by the Methods of Hübl, Wijs, Hanus, and McIlheney.

By J. Stewart Remington and Harold Lancaster.

The oldest method of determining the "iodine value" of oils, that devised by Hübl, possesses several defects. The fresh solution rapidly loses in strength on storage and also is not fit to use if more than a week old. The rate of loss in strength is lessened by using purified absolute alcohol to prepare the solution, but even then the solution quickly becomes so weak as to be of no further service. Another objection is the slowness of the reaction, on account of which various workers have recommended different periods of time, from two to twenty-four hours, for the completion of the reaction. The following contrasts show the results obtained with pure oils on using the methods named:

	Linseed Oil.	Lard Oil.	Rape Oil.
Hübl	172.92	67.82	87.99
Wijs	172.71	66.69	87.92
Hanus	168.99	65.40	86.53

These figures show that although the Hübl and Wijs methods compare favourably with one another, somewhat lower results are obtained by the Hanus method. The maximum absorption of iodine was obtained in the case of linseed oil in twenty-four hours by Hübl's method; in two hours with the Wijs solution; and in forty-five minutes by the Hanus method. In order, however, to get results which would favourably compare with those obtained by the slower method of Hübl, it was found to be necessary to have at least 80 per cent. excess in the case of Wijs and 70 per cent. in the case of Hanus. Figures were given in the paper to illustrate this and details concerning other points. McIlheney's "bromine absorption" method ("Jour. Amer. Chem. Soc.," 1899) consists, briefly, in adding an excess of standard solution of bromine in carbon tetrachloride to a weighed portion of oil or fat in a stoppered bottle, and subsequently determining the excess of bromine by adding potassium iodide and titrating the free iodine with sodium thiosulphate. Any hydrobromic acid formed is determined in the aqueous solution. The percentage of bromine found as hydrobromic acid is called the "bromine substitution figure," and the total percentage of bromine absorbed, less twice the bromine substitution figure, gives the "bromine addition figure." Several investigators have shown that if the fat or oil is treated with twice the quantity of bromine with which it can combine the reaction is almost instantaneous. Hehner and Mitchell's process, in which the rise in temperature consequent upon the interaction of bromine and oil is measured, is inferior to McIlheney's. The conclusions which the authors derive from their work are, briefly, as follows:

1. That much better results are obtained by the Wijs than by the Hanus or Hübl methods.
2. That the Wijs solution gives results which agree closely with existing data, but that 70 to 80 per cent. halogen is required to obtain quick action and maximum results.
3. That to obtain a maximum absorption by the Wijs method for drying oils two hours must be allowed, for semi-drying oils one hour, and for non-drying oils half an hour.
4. That the mixed Hübl solution deteriorates rapidly, and is not reliable after twenty-four hours, whereas Wijs and Hanus solutions keep for several months. The easily-prepared bromine solution is stable.
5. That in the case of both the Wijs and Hanus methods more concordant results are obtained in the dark than in the light.
6. That none of the iodine absorption methods are so rapid as the bromine process of McIlheney, which is practically instantaneous.
7. That the Hübl method is not only tedious, but fails to make a distinction between the iodine absorbed by the addition and that absorbed by substitution.
8. The bromine process determines the substituted halogen separately to that absorbed by addition, thus affording further information.
9. McIlheney's method, which is both rapid and inexpensive, is preferable to any of the iodine methods.

Tables were appended to show the results obtained with linseed, lard, and rape oils with McIlheney's method, which show that the bromine absorbed in one, two, and five minutes is practically the same.

Mr. Pollard said it is desirable that analysts should come to some agreement regarding the best iodine absorption method; he had found Wijs' the most convenient, but it has the disadvantage that the acetic acid is so volatile.

Mr. COWIE said the fault of Wijs' method is the acid condition that is necessary. It cannot be used for cacao butter, for which Hübl's process gives excellent results. It should be performed in diffused light.

This concluded the session.

At the conclusion of luncheon in the King's Hall the President called on Mr. Peck, who, on behalf of the Cambridge Pharmaceutical Association, gave the Conference an invitation to

MEET NEXT YEAR AT CAMBRIDGE.

It will be the first time the Council has visited Cambridge. Mr. Peck spoke of the glories of the town and of its University, its architectural beauties, and literary treasures. The University authorities have given an indication that they will assist in the development of the programme. The Cambridge branch of the British Medical Association have asked to be allowed to assist and participate in the proceedings. He could promise a quiet, interesting, and refreshing Conference.

Mr. RANSOM joined in giving the invitation. There is no reason, he said, why Cambridge should not be able to emulate the example set by Oxford some years ago.

Mr. W. F. WELLS moved the acceptance of the invitation. Visitors would be able, he said, to follow in the footsteps of Milton, Darwin, and Peck, and to boast that they had "passed through Cambridge."

Mr. RUTHERFORD HILL seconded—where Ireland leads the way Scotland is prepared to follow, he said, amidst applause. He then proceeded to dilate on the educational advantages of the town, and on the influence of environment as evidenced in Mr. Peck.

The motion was carried unanimously.

The meeting then proceeded to elect officers as follows, Dr. Symes, Mr. John Harrison, Mr. Boa and Mr. Giles doing the needful in speech.

PRESIDENT: F. Ransom (Hitchin).

VICE-PRESIDENTS: J. F. Harrington (London), J. P. Gilmour (Glasgow), Dr. R. Green, F.R.S. (Cambridge), John Smith (Dublin), Professor Greenish (London), and E. White (London).

HON. TREASURER: J. C. Umney (London).

HON. GENERAL SECRETARIES: E. S. Peck (Cambridge), and H. Finnemore (London).

COMMITTEE: F. H. Alcock (Birmingham), F. W. Branson (Leeds), E. F. Harrison (London), D. L. Howard (London), H. W. Gadd (Exeter), E. H. Church (Cambridge), J. S. Hills (London), T. Maltby Clague (Newcastle), A. S. Campkin (Cambridge).

LOCAL SECRETARY: (Vacant).

Mr. TYRER proposed a vote of thanks to the local Committee and the Chairman (Mr. Weddell). Mr. Paterson (Aberdeen) seconded.

In an amusing speech Mr. WEDDELL replied eloquently, and thanked the visitors for the geniality, sociability, and cheerfulness they had displayed during the visit to Newcastle. He paid an eloquent tribute to the work done by Mr. Clague, who, he said, should have been Chairman.

Mr. NAYLOR moved a vote of thanks to the President. His speech was a very eloquent one. Mr. Tocher replied. The members then left for a river trip and tea at Tynemouth.

Mr. Francis Ransom, the new President, was an Hon. Secretary of the Conference from 1890 to 1903, having joined forces with Mr. W. A. H. Naylor when the latter became Senior Secretary on the retirement of Dr. John C. Thresh. His thirteen years' services were recognised by his appointment in 1903 as a Vice-President of the Conference, and in the following year at Sheffield he was presented with a testimonial, consisting of a gold watch and an album of the signatures of the donors. Mr. Ransom is the son of Mr. William Ransom, Ph.C., Hitchin, whose life has been so closely identified with the cultivation of medicinal herbs in Hertfordshire, the distillation of essential oils, the manufacture of green extracts and other galenicals. He was educated with the view to co-operation in his father's business, and entered the School of Pharmacy as a student in the 1883 session, when he took certificates in all the subjects. He passed the Minor examination in 1882, and the Major in the April following. Subsequently, Mr. Ransom worked in the Research Laboratory of the Society in London along with Professor Dunstan, and published papers on belladonna and its preparations, devising a process of assay which has become the basis of the official method. He has also worked on many other chemical and pharmaceutical subjects, and has shown care as an investigator, caution in expression of opinion, and acuteness in recognising directions in which statements are not supported by experimental evidence. Mr. Ransom is now and has been for some years a partner in the business of W. Ransom & Son, Hitchin, and although his day's work is administrative and commercial, he has not lost touch with the progress of pharmaceutical knowledge, and at the recent meeting of the International Congress of Applied Chemistry in London he was appointed, along with Mr. P. W. Squire, a member of the International Committee on Variation in the Activity of Certain Potent Drugs. Mr. Ransom was formerly a member of the Pharmaceutical Board of Examiners for England and Wales.



MR. F. RANSOM, Ph.C., F.C.S.

Who were There.

The following is a list of those who signed the attendance-book :

Alcock, F. H., and Mrs., Birmingham
Alexander, T. B., Newcastle
Alexander, T. Burns, South Shields
Ashton, F. W., Croydon
Barlow, T. O., Southsea
Boa, Peter, Edinburgh
Bourdas, I., and Miss, London
Branson, F. W., and Mrs., Leeds
Bell, James, Tynemouth
Bremridge, R., London
Brier, Ernest, Elland
Burbank, Miss A., Oxford
Clague, T. Maltby, and Mrs., Newcastle
Clarke, Frank, and Mrs., London
Clarkson, T., W. Hartlepool
Clayton, C., Oxford
Cleworth, John, Manchester
Coull, Dr. George, and Mrs., Edinburgh
Cowie, Wm. B., Edinburgh
Craig, A., Aberdeen
Crompton, Hy., Bury
Cruickshank, C. M., Turiff
Cumming, John, M.D., Edinburgh
Currie, William L., and Misses (2), Glasgow.
Dakers, John J., Newcastle
Dixon, C. H., London
Dolbear, John, Oxford
Dolbear, Percy, Oxford
Duncan, Wm., Edinburgh
Dunn, W. R., Oakengates
Elliot, W. M., Coldstream
Evans, Sir Edward, Liverpool
Evans, John J., Liverpool
Evans, W. P., Liverpool
Farquharson, J. D., M.D., Newcastle
Finnemore, Horace, and Mrs., London
Foggan, Geo., and Mrs., Bedlington
Gadd, H. Wippell, Exeter
Gilderdale, F., and Mrs., Newcastle
Giles, W., and Mrs., Aberdeen
Goodall, F., London
Hanson, Arthur, Queensbury, Bradford
Hay, W. F., and Miss, Aberdeen
Hearn, John, London
Hill, J. Rutherford, Edinburgh
Hodgson, Cuthbert, Sunderland
Howard, D. Lloyd, London
Howie, W. L., London
Hughes, W. Griffiths, and Miss, Manchester
Ismay, R., Newcastle
Jennings, J. A., and Mrs., London
Johnstone, C. A., Manchester
Jones, Edmund, Hanley
Kay, James P., Aberdeen
Knott, Herbert, Bolton
Layman, C. N., London
Little, Elizabeth L., London
Little, Mary B., Wholey Bridge
Little, The Misses, Manchester
Mair, William, Edinburgh
Martin, N. H., and Miss, Newcastle
Martindale, Dr. W. H., London
McClumpha, Robert, and Mrs., Newcastle
McFarlane, M., Forfar
McMurray, P. B., Helensburgh
Merson, G. F., and Mrs., Kilmarnock
Murdoch, J. F., Birmingham
Naylor, W. A. H., London
Nicholl, Isaac W., Belfast
Noble, H. W., Newcastle
Park, J., and Mrs., Newcastle
Parson, W., London
Paterson, Jas., Aberdeen
Pattinson, Healey, Whitley Bay
Peck, E. Saville, and Mrs., Cambridge
Pentney, J. C., and Mrs., London
Pescod, W., Newcastle
Pollard, E. W., Ryde
Procter, H. Raithby, Hammersmith
Purse, A. B., Sunderland
Purse, Frank
Ranken, C., Sunderland
Ransom, F., and Mrs., Hitchin
Reis, R. P., Dowlais
Russell, C. I., and Mrs., Newcastle
Sargeant, F. P., Leeds
Schofield, T. E., Morpeth
Silson, R. W., Mrs., and Miss, Bradford
Simpson, Morpeth
Simpson, J. F., Felling
Smith, John, and Mrs., Dublin
Smith, W. Crampton, Keith, N.B.
Sutherland, J. W., Glasgow
Symes, Charles, Liverpool
Taylor, Sol., Harrogate
Tocher, John W., Edinburgh
Tocher, Robert, Glasgow
Turnbull, Alex., Newcastle
Twinborrow, John, Worcester
Tyrer, Thos., London
Want, W. P., London
Weddell, George, and Mrs., Newcastle
Weir, A. S., Kemnay
Wells, W. F., Mrs., and Miss Wells, B.A., Dublin
White, Edmund, and Mrs., London
Williamson, L., Newcastle
Wilson, W. P., Haddington
Wishart, J., M.D., D.Sc., Newcastle
Woolley, S. W., London
Wyatt, Wm., Newcastle

I

The New B.P.C. Secretary.

The new Secretary, Mr. Horace Finnemore, B.Sc., who has been appointed to succeed Mr. White as Junior Hon. Secretary of the Conference, is pharmacist at Guy's Hospital, London. He was a Bell Scholar, and distinguished himself when attending the School of Pharmacy. He passed the Major examination in April 1900, and succeeded the late Mr. H. Collier at Guy's soon after. Mr. Finnemore has been a member of the Board of Examiners for England and Wales, and a kindly one he makes. His researches are esteemed by his fellows, and he is well known to frequenters of the Conference meetings, for he has been attending those gatherings regularly since he was a student at the "Square," and a bachelor.



Chemists' Windows.

Contributed by "C. & D." Subscribers. The Editor will be glad to receive photographs of effective window-displays for inclusion in this section. Notes on the displays should accompany the photographs.

Another Newcastle Pharmacy.



This is the frontage of Mr. John Watson's pharmacy 34 Grainger Street, Newcastle-on-Tyne. Mr. Watson specialises particularly in plate goods and optical requirements generally. He uses his window in an effective manner for making the fact known.

New Books.

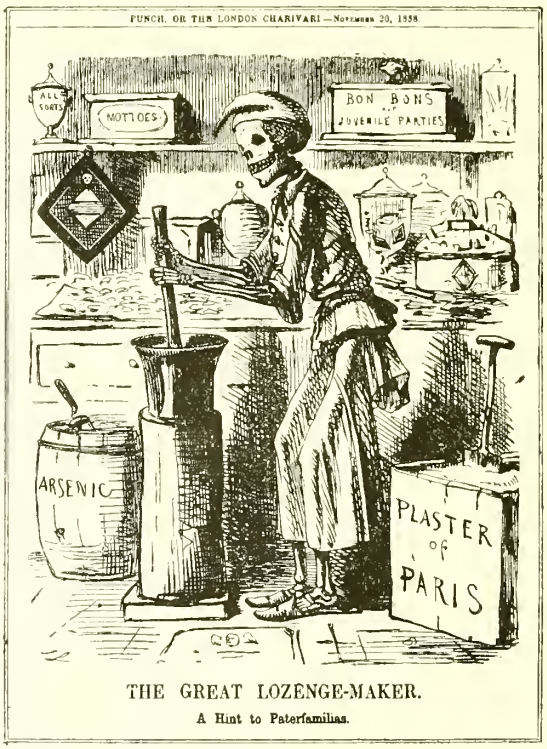
These notes do not necessarily exclude subsequent reviews of the works. Any of these books printed in Great Britain can be supplied, at the published price, to readers of this journal on application (with remittance) to the Publisher of "The Chemist and Druggist," 42 Cannon Street, London, E.C.

Ellison, Mary A. *Manual for Students of Massage.* Third edit. $8\frac{1}{2}\times5\frac{1}{2}$. Pp. 204. 5*s.* net. (Baillière.)

Elliot-Blake, H. *Medical Reform Measures, including the Reform of the Medical Colleges.* 7×9. Pp. 139. 5*s.* net. (Bale, Sons & Danielsson.)

Wallis, C. E. *Atlas of Dental Extractions.* With Notes on the Causes and Relief of Dental Pain. 10×6. 3*s.* 6*d.* net. (Churchill.)

Williams. W. *Principles and Practice of Veterinary Medicine.* 9th edit. $8\frac{3}{4}\times5\frac{1}{2}$. Pp. 1,004. 25*s.* net. (Baillière.)



THE GREAT LOZENGE-MAKER.

A Hint to Paterfamilias.

This cartoon by John Leech and the following extract from "Pharmacy and Poison Laws of the United Kingdom" (p. 37) illustrates the circumstances under which the qualification of the retail vendor of poisons came to be looked after by the United Society of Chemists and Druggists.

"Before the end of the year [1858] a terrible poisoning calamity occurred at Bradford. A druggist in that locality had supplied a local confectioner with arsenic in mistake for 'daff'—a sulphate of lime prepared from burnt spar. The druggist's boy had mistaken the cask. It appeared that the arsenic cask was labelled on the top, but was standing in the store-room bottom upwards, so that the label was towards the floor. The confectioner used the arsenic in the manufacture of peppermint lozenges, which were supplied to another man and sold in the market. Twenty persons lost their lives and over 200 were made seriously ill. This occurrence naturally excited the public mind, and the Government were almost compelled to take in hand the regulation of the sale of poisons. A new Bill was brought forward early in the Session of 1859, this time in the House of Commons, and in the charge of Mr. Spencer Walpole, Home Secretary."

Business Changes.

Properly authenticated business notices (not being advertisements) are inserted in this section free of charge if promptly communicated to the Editor.

The Timothy White Co., Ltd., have opened a branch at 8 High Street, Broadstairs.

Mr. H. G. Crompton, chemist and druggist, has purchased the businesses of Messrs. Tomlinson Bros., 28 Fishergate, and Mr. W. J. T. Jackson, chemist and druggist, 7 Fishergate, Preston.

The British Drug Houses, Ltd., announce that the Davy Hill & Hodgkinsons' branch of their business is being removed to the company's new works at Nos. 22 to 30 Graham Street, City Road, London, N., and on and after Tuesday, August 3, all communications for this branch of the business should be addressed "The British Drug Houses, Ltd. (Messrs. Davy Hill & Hodgkinsons), Graham Street, City Road, London, N." The company's registered offices will also be transferred to the new address on that date. Five London telephone lines have been carried to the new works, and the number covering the whole is "6123 London Wall."

How to Treat Travellers.

1. Traveller after traveller comes into the shop; the day is far advanced and not a stroke of your regular shop work has been touched. Is it polite or etiquette to tell a man, who you know may have come to the town specially to see you, that you cannot be seen?

2. You are working single-handed. A prescription is brought in and promised for fifteen minutes. Immediately a traveller walks in, and, seeing no customer in the shop, starts to talk and unpack samples. Is it the proper thing to tell the traveller that his presence is inconvenient, or to let the customer wait when the medicine is called for?

THESE questions were put by a chemist in the *C & D.*, May 15, and we invited replies, which we have been printing since. We now give a further selection.

(1) Explain your position to the man who has come purposely to see you and offer to lunch or dine with him (so as to save time) at his hotel. Leave the rest to the traveller—and the chef. (2) Ask the traveller to "be seated and smoke a cigar," which no doubt his long-suffering firm keep him well supplied with. This will have the effect of a triple tonic, for it keeps the traveller quiet, defends him against the attacks of multitudes of other knights of the road, and in these days of small profits and big taxes, gives the establishment an atmosphere of prosperity and affluence. Result, order.—ALEX. NAPIER (Manchester).

See every traveller who calls, if only for a minute. If you want nothing tell him so, and also that you are busy. He may be just as pleased to get away as you are to get rid of him. There are many men on whom travellers have to call who waste their time, which, in nine cases out of ten, is more valuable than the chemists'.—C. BROWN.

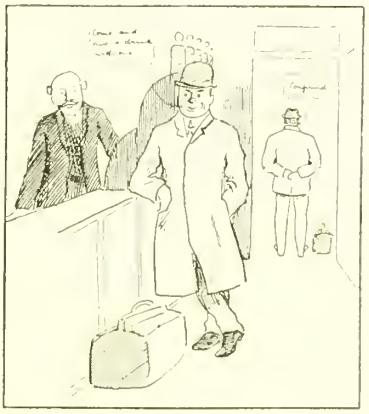
1. I think the chemist who is expecting a representative calling upon him on a certain day, knowing that he is the only one he calls upon, "should most certainly arrange to see him"; it would not be polite to say you could not do so. Far better put the others off.

2. A representative should never enter a shop if he sees a customer in; seeing no customer in, he believes the chemist is at liberty to see him. On entering the shop, if Mr. Chemist would say, "Excuse me, Mr. Jones, until I have made this prescription up, and in the meantime be getting your samples ready," I feel sure the representative would be delighted to do so.—A. H. JONES.

I quite agree with "Pestered" as to the difficulty of treating travellers as one would be done by, especially when single-handed. Still, this is quite possible with a little systematic arrangement. I find by having ready the checked account, if any, and cheque for same; also list of goods required, when he does appear, it is only a matter of two or three minutes to settle the business and see or order any new lines. Where a large number of samples are carried by sundries' traveller, I find it desirable to look them over once a year, and in such cases always find the traveller willing to stand aside when customers appear, as it is to our mutual advantage. Other travellers with whom I do not wish to deal, I tell them I have no new opening, thank them for calling, and decidedly bring interview to a close by taking up work that is waiting to be done, if they are too persistent.—J. T.



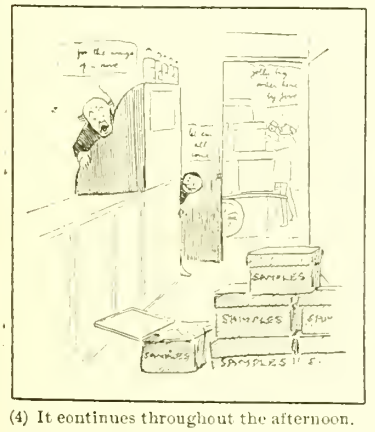
(1) The first traveller appears about breakfast-time.



(2) Others follow in quick succession.



(3) The pressure is maintained all morning



(4) It continues throughout the afternoon.



(5) It reaches a climax in the evening.



(6) And leaves a legacy of disturbed repose.

My habit for many years has been to ask those with whom I do business what train they wish to leave by, and always endeavour to economise their time.—F. S. MOORE.

1. A small printed notice as follows fixed in a prominent position for a month or two:

NOTICE TO TRAVELLERS.

Owing to press of business travellers can only be interviewed between the hours of —— to ——.

Travellers of repute will, after having their attention drawn to the above, arrange their future calls accordingly.

2. The traveller, being the one asking a favour, will willingly wait or call again if a proprietor excuses himself on account of business or meals. Customers should never be kept waiting under any avoidable circumstance.—E. A. COLLINGS.

1. It certainly is not polite to tell traveller you cannot be seen; you might apologise to him for not being able to see him first, and then arrange a visit later on, perhaps after hours.

2. You should certainly not allow customer to wait; make up the medicine first. Tell the traveller you must be excused for a little as you have a prescription in hand.—C. I. D.

French Codex Formulas.

Selected from the Edition of 1908.

Emplâtre Simple.

Emplastrum Simplex.

Powdered litharge	...	1,000 grams
Lard and olive oil, of each	...	1,000 ,,
Water	...	2,000 ,,

Prepared in a similar manner to emp. plumbi, B.P.

Emplâtre Vésicatoire.

Emplastrum Vesicans.

Elemi	...	100 grams
Olive oil	...	40 ,,
Basilicon ointment	...	300 ,,
Yellow wax	...	400 ,,
Cantharides (No. 37 powder)	...	420 ,,

Melt the elemi in the oil, add the ointment and wax, and, when the whole is melted, add the cantharides and stir till beginning to set; pour into a jar.

Extrait d'Aconit.

Extractum Aconiti.

Aconite-root, in No. 26 powder	...	1,000 grams
Alcohol, 70-per-cent.	...	6,000 ,,

Moisten the powder with 500 grams of spirit in a closed vessel for two hours, and transfer to a percolator, with more spirit. When percolation commences, close the apparatus, macerate for twenty-four hours, and percolate with the remainder of the spirit. Recover the alcohol, allow the residue to cool, filter, and evaporate in a water-bath to a soft extract.

Extrait de Belladone.

Extractum Belladonæ.

Belladonna-leaves, in No. 26 powder	...	1,000 grams
Alcohol, 70-per-cent.	...	6,000 ,,

Proceed as for extract of aconite, but evaporate to a solid extract containing 10 per cent. of water.

Extrait de Bourdaine (Fluide).

Extractum Frangulæ Fluidum.

Black-alder bark, in No. 26 powder	...	1,000 grams
Alcohol, 30-per-cent.	...	a sufficiency

Proceed to percolation as for aconite extract; reserve the first 800 grams of percolate. Continue percolation and recover the spirit; concentrate the residue to 200 grams and add to the reserved percolate. Set aside for two days in a cool place and filter.

Extrait de Cascara Sagrada.

Extractum Rhamni Purshianæ.

Cascara sagrada, in No. 26 powder	...	1,000 grams
Alcohol, 60-per-cent.	...	6,000 ,,

Moisten the bark with 400 grams of spirit; otherwise proceed as for extract of aconite, but evaporate to a solid extract.

Extrait de Cascara Sagrada (Fluide).

Extractum Rhamni Purshianæ Fluidum.

Cascara sagrada, in No. 26 powder	...	1,000 grams
Alcohol, 50-per-cent.	...	a sufficiency

Proceed as for black-alder extract, using 400 grams of spirit to moisten the bark. Product 1,000 grams.

Extrait de Chiendent.

Extractum Graminis.

Dog's-grass rhizome, cut small	...	1,000 grams
Distilled water	...	8,000 ,,

Macerate the rhizome in 5,000 grams of water for twelve hours, stirring occasionally, and strain with expression. Macerate the residue in the rest of the water for twelve hours, and strain. Mix the two liquors, filter, and evaporate on a water-bath to 1,000 grams; allow to settle for twenty-four hours, decant, and evaporate to a soft extract.

Extrait de Ciguë. Extractum Conii. —A solid extract made by double maceration of 1,000 grams of powdered (No. 26) conium-fruit in 3,000 grams of 70-per-cent. alcohol each time. The solid extract is dissolved in four times its weight of distilled water, filtered, and the filtrate evaporated to form the extract.

Extrait de Coca (Fluide). Extractum Cocæ Fluidum.—A 1-in-1 preparation made with 50-per-cent. alcohol.

Extrait de Cola. Extractum Colæ. —A solid extract prepared in the same way as cascara sagrada extract.

Extrait de Cola (Fluide).—Extractum Colæ Fluidum.—Prepared as black-alder extract.

Extrait de Colchique. Extractum Colchici.—Prepared in the same manner as belladonna extract.

Extrait de Condurango (Fluide). Extractum Condurango Fluidum.—A 1-in-1 preparation made with 45-per-cent. alcohol, the process followed being the same as for black-alder extract.

Extrait de Cubèbe. Extrait Oléo-résineux de Cubèbe.—A semi-liquid preparation, made by double percolation and distillation, first with ether and then with 95-per-cent. spirit.

Extrait de Digitale. Extractum Digitalis.—Made by the same process as extract of aconite.

Extrait de Douce-Amère. Extractum Dulcamaræ.—The herb in No. 6 powder is percolated with water, evaporated, the residue dissolved in 90-per-cent. alcohol, and again evaporated to a soft extract.

Extrait d'Ergot de Seigle. Ergotine. —Made by a process closely resembling the preceding, but with 95-per-cent. alcohol.

Extrait d'Ergot de Seigle (Fluide).

Extractum Ergoti Fluidum.

Ground ergot	...	1,000 grams
Cherry-laurel water	...	150 ,,
Alcohol, 95-per-cent.	...	500 ,,
Tartaric acid	...	1 ,,
Precipitated calcium carbonate	...	2 ,,
Salicylic acid	...	1.50 ,,
Distilled water	...	a sufficiency

Percolate the ergot in 2,000 grams of water containing the tartaric acid, and evaporate to 500 grams; cool, add the carbonate, then the spirit, shake well, and set aside for twenty-four hours. Filter, drive off the spirit at a gentle heat, add the cherry-laurel water and make up to 1,000 grams with water; add the salicylic acid and filter.

Extrait d'Evonymus Atro Purpureus. Evonymine Brune; Extrait de Fusain Noir Pourpré.—A powder prepared by maceration in 60-per-cent. alcohol, and distillation, and containing 2 per cent. of milk sugar.

Extrait de Fougère Mâle. Extrait Oléo-résineux de Fougère Mâle.—A semi-liquid extract made by percolation with ether and distillation.

Extrait de Gentiane. Extractum Gentianæ.—A soft extract made similarly to dog's-grass extract.

Extrait de Grindélia (Fluide). Extractum Grindeliæ Fluidum.—A 1-in-1 preparation, made with 75-per-cent. alcohol.

Extrait d'Hamamélis. Extractum Hamamelidis. — Prepared with the leaves in No. 15 powder and 60-per-cent. alcohol in the same way as aconite extract.

Extrait d'Hamamélis (Fluide). Extractum Hamamelidis Fluidum.—A 1-in-1 extract made by percolation with 45-per-cent. alcohol.

Extrait d'Hydrastis. Extractum Hydrastis.—Prepared in the same manner as hamamelis extract.

Extrait d'Hydrastis (Fluide). Extractum Hydrastis Fluidum.—The process followed is that for black-alder extract, using 70-per-cent. spirit.

Extrait d'Ipécacuanha. Extractum Ipecacuanhæ.—Made as aconite extract, but concentrated to a solid.

Extrait de Jusquiame. Extractum Hyoscyami.—Prepared exactly as belladonna extract.

Extrait de Muguet. Extractum Convallariæ Maialis.—A solid extract, made by infusion of the whole plant in boiling water and evaporation.

Extrait d'Opium. Extrait Thébaique. —A solid extract prepared by macerating 1 of Smyrna opium in 12 of distilled water and evaporating.

Extrait de Pissenlit. Extractum Taraxaci.—Made by infusion of the coarsely powdered leaves in boiling water and concentration to a soft extract.

Extrait de Quassia. Extractum Quassiæ.—A solid extract prepared by macerating and digesting the quassia (No. 6 powder) in water, and evaporating.

Extrait de Quinquina Jaune. Extrait Alcoolique de Quinquina.—A soft extract made in the same way as aconite extract, but with 60-per-cent. alcohol.

Extrait de Quinquina Rouge. Extrait Aqueux de Quinquina.—Prepared by macerating the drug (No. 30 powder) in water and concentrating to a soft extract.

Extrait de Ratanhia. Extractum Ratanhiæ.—Prepared as dog's-grass extract.

Extrait de Réglisse. Extractum Liquiritiæ.—Prepared as dog's-grass extract.

Extrait de Rhubarbe. Extractum Rhei.—Prepared as dog's-grass extract.

Extrait de Salsepareille. Extractum Sarsaparillæ.—Made by the same process as aconite extract, but with 60-per-cent. alcohol.

Extrait de Salsepareille (Fluide). Extractum Sarsaparillæ Fluidum.—A 1-in-1 preparation, made in the same way as grindelia extract, but with 30-per-cent. alcohol.

Extrait de Scille. Extractum Scillæ. —Prepared as aconite extract, using 60-per-cent. spirit.

Extrait de Styles de Maïs. Extrait de Stigmates de Maïs.—A soft extract made by infusion in boiling water and evaporation.

Extrait de Valériane. Extractum Valerianæ.—Prepared with 60-per-cent. alcohol, following the process for aconite extract.

Medical Gleanings.

Removing Superfluous Hairs.

Dr. J. L. Bunch delivered a lecture at the Polyclinic recently on modern methods of treatment of some common skin-diseases. In the course of this he referred to hypertrichosis or superfluous hair. He said that when the hairs are few in number but large and pigmented, no method is equal to electrolysis. When there is merely a soft down he recommends the application of a barium-sulphide paste such as the following :

Barium sulphide	...	...	gr. xij.
Powdered soap	...	...	gr. xv.
Starch-powder	...	...	gr. xv.
Benzaldehyde to	...	...	3j.

This, if applied from time to time when the hairs grow up again from the papillæ, is quite sufficient to keep the growth under. In order to avoid the possibility of a resulting dermatitis the paste should not be applied for more than five minutes and then washed off. The use of *x* rays makes the hair fall out, but has not until recently proved a success in hypertrichosis. Noiré, of Paris, has lately devised a method by which only those rays are allowed to act upon the skin which affect the hair papillæ. This he accomplishes by introducing between the tube and the skin a plate of aluminium four-tenths of a millimetre in thickness. The exposures are made at intervals of a fortnight, and at the end of the fortnight after the first exposure the hairs are found to be clubbed, thin, and depigmented at the bases, but they have not fallen out. A fresh application is made, and in from eight to ten days afterwards a certain number of hairs begin to fall out. Four or five more applications are made, and by this time all the hairs will have fallen out. Two more exposures are made at intervals of a month, and after two months a slight regrowth commonly occurs, representing about one-tenth of the fallen hairs. Two or three new applications will cause these to disappear, and this time finally. The method is especially suitable to those extensive beards involving both cheeks and chin, which are a source of the greatest mental discomfort to the patient, are a distressing deformity, and cannot be satisfactorily treated by any other method.

Lactic acid Therapy.

Professor Walker Hall and Mr. W. A. Smith, of Bristol, publish in the "British Medical Journal" an account of experiments which they have carried out with lactic-acid tablets. From these the deduction is made that even the best commercial preparations are not sufficiently and regularly active for routine use, and that freshly prepared fluid cultures should be employed when lactic-acid therapy is indicated. The activity and power of the organisms in producing acids cannot be taken as an index of their multiplication and inhibitory action upon other organisms, and it is probable that no one organism can be regarded as efficacious in every case. When an organism fails to produce the desired result, certain laboratory tests may indicate the selection of bacilli possessing other characteristics. It should also be borne in mind that the lactic-acid therapy is only indicated when the putrefactive anaërobic organisms are present in the fæces in excess, and that without such a guide this form of medication may aggravate rather than ameliorate the intestinal conditions. Having regard to the influence of extraneous organisms in milk and the difficulty in pasteurising milk, these experimenters suggest that the cultures should be preferably administered in a liquid sugar medium.

Diphtheria-extinction.

At a recent meeting of the Society of Medical Officers of Health, Dr. W. G. Savage, in initiating a discussion upon the scientific control of diphtheria, gave his scheme for controlling and possibly extinguishing diphtheria, as follows :

Medical practitioners to obtain free bacteriological diagnosis in suspected cases.

Notification, prompt isolation of all cases, and subsequent disinfection when the patient is again healthy.

A routine bacteriological examination of all immediate "contacts," and their isolation until free from bacilli.

The release of all definite cases only after a sequence of negative bacteriological examinations.

Optical Delusion in the Aged.

Sir R. Douglas Powell, in the lecture referred to, speaks of the cerebral condition in old people in which they see patterns or geometrical shapes, books arranged in order, and so on, to their great annoyance, and sometimes with considerable distress. He speaks of it as a kind of tinnitus, or buzzing of the ophthalmic nerve, instead of the auditory nerve. He has found the following mixture most useful in such cases :

Ac. hydrobrom. dil.	...	...	♏xx.
Spt. chloroform.	...	...	♏x.
Tr. humuli	...	...	ʒss.
Syr. zingiberis	...	...	ʒj.
Aquam ad	...	...	ʒss.

To be taken in water three times in the day, or as an occasional dose.

Dark-coloured spectacles have been found useful, wearing them in the room or when going out.

Anthrax.

Professor F. W. Eurich, on behalf of the Bradford Anthrax Investigation Board, examined during the year ended October 31, 1908, 435 samples of wool, hair, and dust. Anthrax bacilli were cultivated from twenty-one specimens, of which twenty were blood-stained. The blood-stained material and its dust may consequently be pointed out as the "carriers" of anthrax, as is further shown by the fact that during three years 600 samples not stained gave negative results, while of 139 blood-stained specimens 14.4 per cent. contained anthrax germs. Germicides (formaldehyde, Cyllin, and Leach's germicide) fail to kill anthrax spores in the matted blood-stained fibres in the time they produce this result when the spores are suspended in water or dried on the fibre. A 2-per-cent. solution of formaldehyde kills the spores under the latter conditions in two hours, but anthrax bacilli could be grown from blood-stained mohair after steeping in this solution for five days. An attempt to disinfect unopened bales by electrolysis proved unsatisfactory. Anthrax has never occurred in men who only manipulated washed wools.

Unna's Bandage in Ulcers of the Leg, etc.

Hecker has employed Unna's paste since 1886, and finds the original formula to be the best—viz. :

Zinc. oxidi, Gelatin. Glycerini	...	...	aa	partes iv.
Aq. destillat.	...	...	aa	partes xvj.
Iehthyol	...	...	...	partem j.

The leg is thoroughly cleansed with soap in a warm bath, shaved, and the fat removed by rubbing with cotton-wool dipped in ether or benzine. The whole of the leg except the ulcer is then painted by a bristle paintbrush with Unna's paste liquefied (but not heated) in a water-bath. The ulcer is sprinkled over with a thick layer of airol and covered with cotton-wool, which is also placed round the foot immediately behind the toes and around the leg about a handbreadth below the knee. The heel and ankle are covered with cotton-wool or, in very sensitive people, with boletus igniarius. Two strong gauze double-headed bandages (that is, rolled from both ends towards the middle to get the necessary pressure) are well wrung out of water and applied, if possible, before the patient leaves bed. The leg is bandaged from the ankle to the toes and upwards to a handbreadth below the knee, the cotton-wool reaching a centimetre higher, each turn of the bandage overlapping the previous one. The second bandage is similarly applied over the first, every turn being drawn equally tight. Unna's bandage is worn until some time after the ulcer heals, and then an elastic bandage is used. Hecker leaves Unna's bandage on three weeks before changing and later for four or six weeks.—*B.M.J. Epitome.*

Tapeworm.

A Physician, writing to the "British Medical Journal," states that his daughter (aged six) had been troubled with a tapeworm for two years. During this time nine unsuccessful attempts had been made to dislodge it—one with pomegranate and the others with male-fern administered in various ways. Then the first trial of oil of filmaron proved entirely effectual, and produced no sickness as the ordinary male-fern preparation had done.

Reviews.

Southall's Organic Materia Medica. A Handbook treating of the more Important of the Animal and Vegetable Drugs made Use of in Medicine, including the whole of those contained in the British Pharmacopœia; Designed for the Use of Teachers, Pharmaceutical and Medical Students, Chemists, Druggists, and others. By John Barclay, B.Sc., F.C.S. 7th ed. Revised and enlarged by Ernest W. Mann, Ph.C. $8\frac{1}{2} \times 7$. Pp. xx + 376. 7*s.* 6*d.* (London : J. & A. Churchill, 7 Great Marlborough Street, W.)

No radical change has been made in the seventh edition of the familiar "Southall's Materia Medica," the principal alterations evident being those connected with the chemistry of the various medicinal products. Many desirable changes have been made in the latter section, which co-ordinates the indigestible mass of mere statistics concerning the numerous principles or their decomposition-products yielded by drugs which are so frequently presented to the student for consideration. The chemical monographs of senna, rhubarb, and cannabis indica are instances in which the enumeration of the principles is simplified. The descriptions of the official drugs are those of the Pharmacopœia. The use of various size types enables many important additional notes (especially concerning substitutes) to be included without making the book unduly bulky, but the small type must occasionally prove trying to the student's eyes. The inclusion of many drugs not commonly used in British pharmacy makes the book a useful work of reference to the retail chemist. On the whole Mr. Mann has, in his revision of the work, further enhanced its utility, and the book can be thoroughly recommended to the student or the retailer who desires the maximum of information concerning materia medica in the minimum of space.

Traité Pratique de Savonnerie. Par Edouard Moride et E. Varenne. $9\frac{3}{4} \times 6\frac{1}{4}$. Pp. 456 (no index). 16f. (Paris : Béranger, 15 Rue des Saints-Pères.)

Deals with the manufacture of soaps in a detailed manner. The materials used and methods of testing are first particularised, then follow descriptions of the plant required in the industry, the various types of machines being illustrated. The section on toilet-soaps is one which will interest most pharmacists; it contains recipes for the various kinds of toilet and medicinal soaps. The analysis of soap and the extraction of glycerin are dealt with in the final chapters. Those who read French will find in this book a good guide to the processes of soap-making. The table of contents is somewhat extended, and partly makes up for the absence of an index. The book is well known in France, the edition under review being the third.

An Introduction to the Science of Radio-Activity. By Charles W. Raffety. $8 \times 5\frac{1}{4}$. Pp. 208. 4*s.* 6*d.* net. (London : Longmans, Green & Co., 39 Paternoster Row.)

"A concise and popular account of the properties of the radio-active elements and the theoretical conceptions which are introduced by the study of the radio-active phenomena" is what the author set out to produce. The result is a fascinating account of the discovery, uses, and applications of radium, polonium, and actinium. The greater part of the volume deals with radium emanations. In the book is summarised the work of the Curies, Becquerel, Sir William Ramsay, Professors Rutherford and Soddy, and Sir J. J. Thomson in this connection. It is the best popularly written book on the subject which has been published.

Dictionary of Medical Treatment, for Students and Junior Practitioners. By Arthur Latham. $7\frac{1}{2} \times 5$. Pp. 325. 6*s.* net. (London : J. & A. Churchill, 7 Great Marlborough Street, W.)

Designed to give students a definite idea of the usual procedure in the majority of cases of a disease, this book fulfils the purpose very well, and on this account is of use to chemists, who, however, are already well catered for in specially compiled manuals of treatment. The method adopted in this work is to give first a definition of the disease, then the local and general treatments. In the case of diabetes a good deal of space is taken up with diet-tables, the regulation of the patient's food being the most important part of the treatment of this disease. Under "Poisoning" directions are given for the treatment of a larger number of forms of poisoning than is usually given in similar works. To illustrate the concise style of the monographs we reproduce one of the shortest :

Thread-worms.

In this condition re-infection is constantly occurring; great care should therefore be taken to keep the parts about the anus absolutely clean. Constant changes of clean linen are essential. Uncooked vegetables and fruit should be forbidden, and the water drunk must be pure and free from ova.

The itching may usually be relieved by the use of the B.P. carbolic-acid ointment.

The lower bowel should be cleared out, and then the colon should be thoroughly irrigated with large quantities of salt and water (1 to the pint). This procedure should be followed every second night until the worms cease to appear. As a rule, three weeks' treatment is sufficient.

An occasional purge with scammon. 3 gr., ext. bellad. $\frac{1}{6}$ gr., oleo-resin. zingib. $\frac{1}{4}$ gr., hydrarg. subchlor. 1 gr. is often of service in obstinate cases. Iron and arsenic should be prescribed for a month or two.

Recent Advances in Organic Chemistry. By A. W. Stewart. $9 \times 5\frac{3}{4}$. Pp. 296. 7*s.* 6*d.* net. (London : Longmans, Green & Co., 39 Paternoster Row, E.C.)

This work collates in lucid form the newer reactions, syntheses, and theories of prime importance to the student or research-worker in higher organic chemistry. The first chapter deals with the main currents in organic chemistry during the last fifty years. The important Grignard reaction is then critically and exhaustively, yet simply, considered. This chapter alone makes the book of inestimable value to the modern chemical student. The third chapter, on asymmetric synthesis, although short, gives the main principles and reactions of stereochemistry in a manner calculated to be of the greatest utility. Pharmacists interested in the study of alkaloids and terpenes, chemists desirous of following the formation of important closed-ring compounds from substances with open chains, physiologists wishing to learn the principles of Fischer's work on the polypeptides or to have indicated to them possible paths of plant-metabolism, cannot do better than draw upon the fount of information provided, which starts from root principles. The best feature is that in all syntheses and decompositions graphical formulæ are given, with all successive steps clearly indicated.

A Text-book of Botany and Pharmacognosy, Intended for the Use of Students of Pharmacy, as a Reference-book for Pharmacists, and as a Handbook for Food and Drug Analysts. By Henry Kraemer, Ph.B., Ph.D. $9\frac{1}{2} \times 6$. Pp. 850. Third edition, 21*s.* net. (J. B. Lippincott Co.)

Although but few pages have been added to this new edition, the changes for the better include about fifty line-drawings, which replace half-tone photographs—a procedure which enables the internal structure to be better represented, thus facilitating the microscopical identification of drugs. Several new illustrations, dealing chiefly with solanaceous drugs, have also been added, while the portions on reagents and micro-technique have been extended and form an exceedingly useful and compact aid to the practical worker. The first part of the book deals with botany, which is treated in a rather different manner from the usual text-book. The requirements for the Major examination in England are adequately covered, but the examples are drawn as far as possible from medicinal plants, and combine materia medica with botany, and the student learns both far better than in the usual disconnected manner in which the two subjects are treated from different points of view. The second portion of the book is on pharmacognosy. Here various groups—seeds, roots, barks, etc., including a chapter on powdered drugs—are dealt with in the systematic manner which is the keynote of the book—namely, grouping and classification, with keys for the purposes of identification. The book is one which will simplify the work of all connected with drug-examination, and it undoubtedly specifically supplies the needs of the student desirous of the higher qualification of the Pharmaceutical Society.

Five Decades.

PRELUDE.

In the far-off 'forties Pharmacy was born,
Tenderly they nursed her, helped her feeble gait,
Parliament, her sponsor, thinking to adorn,
Hapless, helpless maiden, 'vested her in State
With fitting legal garments, frilled and furbelowed,
Puny, pretty Pharmacy, wilted 'neath the load;
Till the Prophet found her, sickly as could be;
"What she needs," he thundered, "is a little C. & D."

I.

Wise Men had forgathered in the Lane of Bow,
Vending druggists' sundries to the world at large,
"Make a Book to please her," someone whispered low,
"Teach her how to prosper; take her in your charge."
So the Book was made then, small yet full of "go,"
Book destined to please her, as all the world should know,
Book to teach her offspring to think, and look, and see.
Thus and thus they made it, their firstling *C. & D.*

II.

Once a month emerging, confident in strength,
Full of hope unhampered by the narrow mind,
Independent, sturdy. "Now do we at length,"
Cried delighted Pharmacy, "life a pleasure find,
"Latest gift ye gave us makes our duty plain,
"Smooths the road of progress, hinders us from vain,
"Egotistic vapourings, sweeps the cobwebs free;
Give us more, we like you, thrice-welcome *C. & D.*"

III.

Listening to this clamour in that Lane of Bow,
Deep the Wise Men pondered, weighing *pro* and *con.*,
Purple shadows drifted 'slant the evening glow,
Till resolve was taken: "Doubt and fear begone!
"Grasp the fickle future in a sanguine fold,
"Sterling faith in Pharmacy urges us to hold
"Highest hopes couragcous, to success the key."
Then and there they made it a weekly *C. & D.*

IV.

Steady grew the stripling, till the full-grown man,
Unapproached, reliant, pointed them the way,
Near and far he led them, till Pharmacy began
To feel the pulse of Empire throbbing to her sway,
Now where'er they wander Britain's sons may find,
Salmon-covered messengers, thought with *Home* to bind,
Spreading place and progress over land and sea:
"Missioner of Commerce" *means* "The *C. & D.*"

V.

Fifty years of striving crowned with rare success,
Years of making history, for æons yet to come;
Years of building friendships; sorrows, more or less,
Triumphs, disappointments—the usual human sum.
Much work still before us, great things yet remain
To be accomplished wisely our prestige to maintain,
On and on unceasing goes the fight for Pharmacy
But we're younger now than ever at OUR JUBILEE.

Fairchild Scholarship and Prizes.

THIS competition was held on June 23, at five centres, with the following gentlemen acting as supervisors: Cardiff, Mr. Albert Hagon; Dublin, Mr. W. F. Wells; Edinburgh, Mr. Peter Boa; Manchester, Mr. James Grier; London, Mr. S. Lamplough Scott. The papers were assessed by Mr. Peter Boa (practical pharmacy and prescription-reading), Mr. William Kirkby (chemistry), Mr. A. J. Phillips (materia medica), and business knowledge by the Secretary, Mr. A. E. Holden, who sends us the results as follows:

Mr. Bertie Hall, now of Bournemouth, wins the Scholarship with 405 marks out of a possible 500.

Mr. Horace Wright, Harrow, the runner-up, wins the England prize.

Mr. George Hutton, Blackrock, Dublin, wins the Ireland prize.

Mr. William A. Russell, now of Newhaven, Sussex, wins the Scotland prize.

Mr. Thomas Wynne Thomas, now of London, wins the Wales prize.

There were 49 entries, and 41 candidates sat the examination: England 28, Ireland 4, Scotland 7, and Wales 2. On the individual subjects the candidates representing the different countries made the following percentages:

	Mat. Med.	Bus. Know.	Chem.	Prac. Phar.	Total Average.
England	42.8	46.2	46.4	63.1	49.6
Ireland	27.5	30.2	38.2	68.6	41.5
Scotland	42.8	55.4	47.7	72.3	54.5
Wales	51.0	59.0	61.6	60.6	58.0

Mr. Bertie Hall was registered as a student of pharmacy at Cardiff, and apprenticed to Mr. A. J. Bellamy, of that town. Later he was with Mr. A. C. Saxby, Cheltenham. Mr. Hall, who was sixth in the competition last year, writes: "I am indebted to Mr. Saxby for thorough tuition in all the branches of practical dispensing." His present employer is Mr. Frank Rye, Bournemouth.

Mr. Horace Wright, registered as a student of pharmacy at Harrow, and apprenticed to Mr. James Attenburrow, Melton Mowbray, is now with Mr. Hubert Rigden, Harrow.

Mr. George Hutton, registered as a student of pharmacy in Dublin, and apprenticed to Mr. J. Michie, Blackrock. He is now with Dr. J. Evans, Dublin.

Mr. William A. Russell, registered as a student of pharmacy at Lerwick, Shetland, his native town, and apprenticed to Mr. A. A. Porteous, Lerwick. He is now with his brother Mr. R. L. Russell, Newhaven.

Mr. Thomas Wynne Thomas, registered as a student of pharmacy at Aberdovey, and apprenticed to Mr. Henry Hughes, Twickenham. He is now with Mr. Richard Thomas, Upper Baker Street, N.W.

Prescription Problem.

THE response to the jumble prescription problem given in our Coloured Supplement of July 17, although moderate, is gratifying, considering, the nature of the script. Although none of the competitors have rendered perfectly correct solutions, failure in several instances is due to not being able to pick out the text of the prescription from the matter in the letter. The following is the correct rendering of the prescription:

Syr. Eastoni ... ... ʒij.
Sig ʒj. t.d.s. ex aqua ante cibum.

The majority of the competitors named the syrup correctly, but a fair proportion favoured the reading "Eastonii." Four competitors gave syrup of codeine as the preparation prescribed, while two gave liq. glycyrrhizæ and syr. codeinæ. The following are each awarded a copy of "The Chemists' Medical Dictionary" for their solutions, which were quite correct except for slight omissions in the directions:

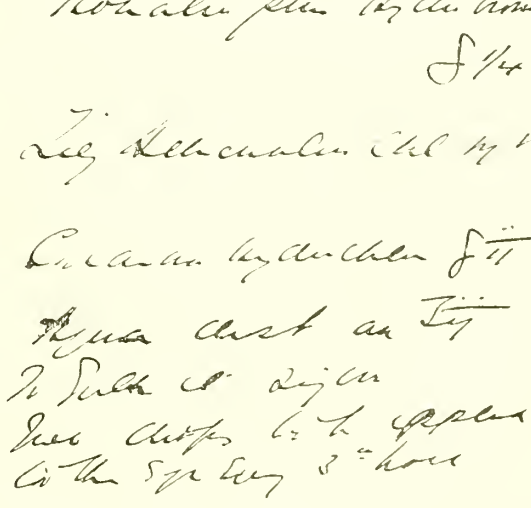
Mr. J. HAMPTON, 12 Government Road, Enfield Lock.

Mr. ANGUS GARDEN, c/o Messrs. Strachan & Gerrie, 138 Rosemount Place, Aberdeen.

Mr. A. YOUNG, 39 Stirling Street, Airdrie.

Mr R. B. PRICE, c/o Mr. H. Bucking, corner of Park Road and Victoria Road, Aston Manor.

The next problem is as follows:



Postcard replies will be received up to August 7.

MR. WILLIAM HARVEY, senior dispenser to the City of London Hospital for Diseases of the Chest, is retiring from that position after fifty years' service, owing to ill-health. The Committee of Management have recognised in a most generous manner the long service and valuable assistance he has rendered to the institution. Mr. Harvey was divisional secretary for North-East Bethnal Green for some years. He is highly respected and greatly esteemed by the chemists in the district.

Trade Notes.

Messrs. Burroughs, Wellcome & Co.'s Exhibit at the Bombay Medical Congress in February last (*C. & D.*, March 20, p. 462) has received the highest award.

Messrs. A. de St. Dalmas & Co., Leicester, received on July 28 from Messrs. Hambrook & Son, chemists, Dover, a note saying: "*Re* Latham's Channel Flight—you will like to know that we supplied a roll of your National Adhesive Plaster for dressing the cuts on the aviator."

Goodman's Corn-file.—We have received from Messrs. T. G. Lindsey & Co., Ltd., 17 Leather Lane, Holborn, London, E.C., a specimen of Goodman's corn-file, which is remarkably good value, for it retails at 3*d*. The files are effectively displayed on a card holding a dozen.

Sozodont, many chemists will be glad to hear, has now been placed on the protected list of the P.A.T.A., and Messrs. Hall & Ruckel, 24 Holborn, London, E.C., call attention to the terms upon which they supply it, direct or through wholesale houses. They are instituting an exceptionally vigorous advertising campaign for this popular dentifrice.

Messrs. F. W. Hampshire & Co., of Derby, whose "Wasp" Fly-catchers are referred to in the Supplement Section of this issue, inform us that "in order to cope with the tremendous flood of orders which they have received this season" they have opened additional works at Burton, and are thus able to deal with the demand. The Burton place is the Mosley Street works, recently occupied by Messrs. Ind, Coope & Co.

"The Stick in the Glass Case."—The accompanying illustration shows the manner in which Messrs. Yardley & Co., Ltd., Carpenters' Road, Stratford, London, E., put up their shaving-stick. This is a soap that is steadily growing in popularity owing to the fact that it gives a permanent and non-irritating lather, and provides a comfortable and smooth shave. The dainty manner in which it is kept in the glass case is also appreciated by customers.



The Chemists' Co-operative Wholesale, 5 and 7 Laburnum Street, Kingsland Road, London, N.E., "implement their promise" to give a share of the profits to their customers. They announce in this issue that for the first six months of this year they are giving purchasers of between 25*l*. and 50*l*. worth of goods from them 3 per cent. on the total purchase, and those who bought more than 50*l*. worth are receiving an 8 per cent. bonus.

Rose-pots.—Messrs. Thomas Christy & Co., Old Swan Lane, London, E.C., have introduced a series of toilet-creams in rose-pots made of biscuit china, which cost the chemist 7*s*. 3*d*. per dozen, filled. No label is stuck on the pots, which are dainty in shape, the lid having a full-blown rose as a handle, and the pots are decorated with small roses. They should therefore get a permanent place on the toilet-table, and the contents will please ladies.

Concrete Perfumes.—Rose Alpine and synthetic "Neroli M" are among the latest creations of Messrs. Th. Muhlenthaler & Co., Ltd., of Nyon, Switzerland. The delicacy and true odour of the former render it an admirable and cheap substitute for otto of rose. The latter has the typical sweet aroma orange flower, and offers considerable advantage in price. Messrs. R. C. Treatt & Co., Dunster House, Mincing Lane, London, E.C., will be pleased to answer inquiries from chemists.

Protected Prices.—The additions to the P.A.T.A. list in July are: Allenbury's additional preparations; Elkington plate powder; Goodman's corn file; Grossmith's additional perfumes; Idris additional syphons; Korpusdoon; Luce's Jersey Eau de Cologne, etc.; Sozodont; Yardley's soap, additional. The removals are: Curry's preparations; Fullwood & Bland's preparations; Lyle's preparations; Oquit, Ltd., preparations; Outem corn remedy; Samsoline preparations; Wood's tooth-paste and other preparations.

"Vaseline and its Uses" is the title of a twenty-four-page pamphlet published by the Chesebrough Manufacturing Co., 42 Holborn Viaduct, London, E.C., which describes the properties of "Vaseline" and its various compounds and contains a series of household hints regarding their use. In the pages appear illustrations, descriptions, and prices of the manner in which the various preparations are marketed. We daresay chemists will find it advantageous to get a supply of these pamphlets.

"Wincarnis" Gold Cup.—Messrs. Coleman & Co., of Norwich, have placed at the disposal of the Committee of the Norwich Amateur Bicycle Club a gold cup, valued at one hundred guineas, to be competed for the first time at the annual sports of the club on Saturday, August 14. Many leading riders in the Kingdom are likely to be attracted by the event. Messrs. Coleman also inform us that a second edition of the "Wincarnis" motor and cycling maps of England and Wales are now ready, and are being despatched to the thousands who have not yet been supplied. The company will be pleased to send the complete set of sixteen maps on receipt of four penny stamps or any four sections on receipt of two penny stamps.

Aseptic Syringes and Pocket First-Aid Outfits.—Messrs. James L. Hatrick & Co., Ltd., surgical instrument makers, 70 St. John Street, Clerkenwell Road, London, E.C., have brought several novelties to our notice. An all-glass hypodermic syringe in neat flat oval metal case, with two hypodermic needles costs 3*s*. 6*d*. The syringe consists of a ground piston fitting accurately into the graduated barrel. Sterilisation is readily effected without fear of breakage of the stout components of the syringe. The "Sterilex" enema is of the hygienic type, constructed of glass and rubber only. The vaginal pipes are made of toughened glass. The price in decorated tins is 3*s*. 6*d*. each. A "Pocket Ambulance Case" within the small compass of $4\times2\frac{3}{4}\times\frac{7}{8}$ includes all the items necessary for minor accidents. The price, 8*s*. 6*d*. per dozen, leaves a good margin of profit for the retailer. A first-aid "Snake Bite" outfit is small enough to go in a waistcoat-pocket. It contains a tube of permanganate of potassium crystals, a knife in case, and the requisite dressings for the proper treatment of snake-bite. The price is 12*s*. per dozen. Messrs. Hatrick & Co. will be pleased to supply chemists with further details than above or in their advertisement.

Digalen and Thiocol.—The former preparation, a solution of an active principle of digitalis containing 0.3 millgram of digitoxinum soluble (Cloetta) in each cubic centimetre. The clinical results obtained by Dr. K. Hochheim, of Magdeburg, Sudenburg Town Hospital, shows that Digalen is preferable to digitoxinum cryst. for injections, enabling the physician to obtain, while avoiding the digestive tract, a reliable digitalis effect. Dr. Weinberger, in trials at the Wiesbaden Hospital, found it almost non-irritant and admitting of the frequent hypodermic application so often desirable. Its invariably constant composition allows exact dosage, and maximum effect can be promptly obtained by administering large doses in quick succession. It is put up in rubber-stoppered amber bottles holding 15 c.c. in case containing tube measure. Thiocol is a derivative of guaiacol which is acquiring a great reputation for the treatment of pulmonary affections, particularly phthisis and bronchitis. Tubes containing 25 tablets (0.5-gram) retail at 2*s*. 6*d*. The manufacturers, Messrs. F. Hoffmann-La Roche Chemical Works, Ltd., 7 and 8 Idol Lane, London, E.C., will supply particulars and pamphlets upon request.

Perfumery in Poland.—There are twenty-eight perfumery works in the kingdom of Poland. Good business was done during 1908, and as manufacturers could buy rectified spirit at a slightly lower rate than formerly, their profits increased.

Trade Report.

NOTICE TO BUYERS.—The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers stock the goods. Qualities of drugs and oils vary greatly, and higher prices are commanded by selected qualities even in bulk quantities. It would be unreasonable for retail buyers to expect to get small quantities at anything like the prices here quoted.

42 Cannon Street, London, E.C., July 28.

AS this section of the Trade Report closes on Wednesday evening, further intelligence will be found in our Coloured Supplement, which also contains a full report of the auctions of first-hand drugs held on Thursday. Few items of interest have transpired in the markets, and the tone partakes of a holiday character. About the only change in fine chemicals is an advance in gallic acid by two makers. Copper sulphate is steady. Citric acid is extremely dull at easy prices, and quinine remains a dead letter. Opium is very quiet, with very irregular values quoted from Turkey. Persian, on the other hand, is firm. Chamomiles are again firmer, the new Belgian crop not yet being available. Guinea grains are somewhat easier, the demand being quickly satisfied with the few lots arriving. Insect flowers remain scarce on the spot, but there is little demand. Canary and fenugreek seeds are firm, and caraway and linseed are steady. Higher prices are asked for Syrian fennel. The improvement in Japanese refined camphor is maintained. New otto is of exceptionally fine quality, but prices have not yet been fixed. Fixed oils have a downward tendency, these including coconut, cotton seed, palm, and turpentine oils. The following changes have taken place since our last :

Higher	Firmer	Easier
Fennel seed	Camphor (Jap. ref.)	Cascara sagrada
Gallic acid	Chamomiles	Citric acid
		Cumin-seed
		Guinea-grains
		Menthol
		Tragacanth

Cablegram.

NEW YORK, July 28 :—Business in drugs is quiet. Opium is 10c. lower at $4 per lb. Jalap is firm at 45c. per lb. Podophyllum (mandrake) is firm at 8c. Cascara sagrada is neglected at 8c. Copaiba is easy at 42c. per lb. for Central and South American. Spearmint oil is easier at $2 per lb. Balsam Peru and senega have both declined and are now quoted $1.50 and 41c. per lb. respectively.

London Markets.

ACETATE OF LIME.—The quotation for grey (80 per cent.) in large quantities is 9*l.* per ton for delivery up to August, but beyond that date makers are not quoting. The production is being restricted, and present prices are likely to be maintained, if not advanced.

ACID, CITRIC.—There is practically no demand, and although 1*s.* 3½*d.* is quoted for foreign, there are sellers at slightly less.

ACID, GALLIC.—Owing to an advance in raw material two makers have advanced their prices to 1*s.* 7*d.*, but in one quarter a little is still obtainable at from 1*s.* 6½*d.* to 1*s.* 6¾*d.*

ACID, TARTARIC.—The previous easy tone prevails, English offering at 10¼*d.* to 10½*d.* and foreign at 9¾*d.* per lb. spot.

AGAR-AGAR is firm, No. 1 Japanese strip selling at 1*s.* 10*d.*

ANISEED remains unchanged at 19*s.* per cwt. for Levant and 21*s.* for Russian.

BALSAM TOLU.—About 12 cases have arrived, which will relieve the spot scarcity; small sales of large tins have been made at 9¼*d.*

CAMPHOR (CRUDE).—China is quiet, with sellers at 132*s.* 6*d.* c.i.f.

CAMPHOR (REFINED) is firmer for Japanese 2½-lb. slabs, sales of which have been made afloat at 1*s.* 6¼*d.* per lb. Sellers of near at hand ask 1*s.* 6½*d.* and 1*s.* 7*d.* to 1*s.* 8*d.* c.i.f. for distant shipment.

CANARY-SEED.—The market is firm, owing to the shortness of supplies in the producing countries, but business is quiet and quotations unaltered at 50*s.* to 52*s.* per quarter for ordinary to good Turkish and Morocco.

CANNABIS INDICA.—According to the Assistant Collector of Excise at Bombay the present export duty on cannabis indica is 200 rs. per Indian maund, which, reckoning the rupee at 1*s.* 4*d.* and the maund at 80 lb., is equivalent to 3*s.* 4*d.* per lb.

CARAWAY-SEED is steady at 33*s.* to 34*s.* per cwt. for fair to good Dutch.

CASCARA SAGRADA.—In one quarter spot sales are reported at 38*s.* per cwt.

CHAMOMILES.—The first pickings of the new Belgian flowers may be expected about the middle of August, the crop being quite three weeks later than usual. Meanwhile the higher range of spot prices for 1908 crop, noted last week, is maintained, sales having been made at 50*s.*, and thirds at 46*s.*

CLOVES.—Dull. To arrive, the value of Zanzibar for October-December is 4 7/16*d.* c.i.f., and for delivery sellers quote August-October at 4⅝*d.*, October-December and January-March at 4¾*d.*

COLOCYNTH.—A small business has been done in ordinary pulp at from 7½*d.* to 8½*d.* per lb.

COPPER SULPHATE is steady at from 18*l.* 12*s.* 6*d.* to 18*l.* 15*s.* per ton in Liverpool for prompt delivery, and December-February is 19*l.* to 19*l.* 5*s.*

CORIANDER-SEED.—Only small sales are reported at recent prices; 8*s.* 6*d.* to 9*s.* per cwt. for common and 10*s.* for good old crop Morocco.

CUMIN-SEED is now in good supply, as there have been large arrivals of new crop Morocco, which is being offered at 35*s.* to 40*s.* per cwt. according to quality. New crop Malta is offering at 33*s.* to 35*s.* c.i.f. terms.

ERGOT is scarce on the spot, but demand is extremely small. Spanish is held at 1*s.* 5*d.* to 1*s.* 6*d.*

FENUGREEK-SEED is firm at 8*s.* 6*d.* per cwt. on the spot for new crop Morocco.

GALLS.—Persian are in retail inquiry, blue offering at from 55*s.* to 57*s.* 6*d.* spot, and for green 47*s.* 6*d.* has been paid, and holders of white now want 44*s.* spot.

GINGER.—Quiet. At auction 135 cases Calicut were brought in, including unsorted native cut at 54*s.* to 57*s.* 6*d.* Brown Calicut rough in bags was bought in at 42*s.* to 45*s.*, and small washed rough Cochin at 42*s.*

GUINEA-GRAINS.—In Liverpool ten bags sold from the quay on private terms; arrivals are taking place somewhat more freely.

GUM ARABIC.—In so-called Persian insoluble sorts several hundred bags of ordinary have been placed at 13*s.* 6*d.* spot, being full value. Pale picked amber is firm at from 20*s.* to 24*s.*, part blocky Bushire sorts are quoted 13*s.* to 17*s.*, and Mohamareh 18*s.* to 22*s.* 6*d.* per cwt. Egyptian gums are slow, offering at 27*s.* c.i.f. to arrive.

HONEY.—In Liverpool sales of Jamaica are reported at 33*s.* per cwt.

INSECT FLOWERS.—Prices from Trieste are still very high, "closed" offering up to 210*s.* and "open" up to 145*s.* c.i.f. terms, but there is little doing here. On the spot a small lot could be had at 180*s.*

JALAP.—Good testing root to arrive in about a month is quoted 1*s.* 11*d.* c.i.f.

LINSEED is steady at 50*s.* to 52*s.* 6*d.* per quarter for good to fine quality.

MACE.—At auction 16 packages West Indian sold at

1*s.* 9*d.* for fair pale, 1*s.* 6*d.* to 1*s.* 7*d.* for ordinary, and 1*s.* 3*d.* for low red and broken.

Menthol in one quarter is being offered at 8*s.* 6*d.* spot for Kobayashi, but most sellers ask 8*s.* 8*d.* to 8*s.* 9*d.*, at which retail sales have been made. Nothing is to be offered at auction to-morrow. Near-at-hand Kobayashi is offered at 8*s.* 3*d.* c.i.f.

Morphine is steady, although there is very little demand at the moment. Hydrochloride crystals are quoted 6*s.* 2*d.*, and powder 6*s.* per oz. net in minimum lots.

Oil, Cassia.—To arrive 80 to 85 per cent. c.a. is offered at 3*s.* 8*d.* c.i.f., and on the spot 4*s.* is quoted.

Oil, Castor.—Hull make is steady at 28*l.* 10*s.* per ton for first pressing for prompt to December delivery, and Belgian is quoted 28*l.* 15*s.* for first pressing, both ex wharf, London.

Oil, Cod-liver.—Quiet on the spot at 64*s.* to 65*s.* per barrel for finest Lofoten oil, and for shipment from 62*s.* to 64*s.* c.i.f. is quoted. A few small orders have been booked for autumn shipment.

Oil, Lemon.—The firmer tone in Messina is maintained, but on the spot little is doing, sellers offering at 3*s.* 6*d.* spot or 3*s.* 6*d.* c.i.f. London.

Oil, Peppermint.—American is firm but quiet at 6*s.* 3*d.* for good brands of Wayne County, while HGH is offered at 8*s.* 7*d.* ato 8*s.* 8*d.* as to quantity. Japanese (Kobayashi) is quoted 5*s.* 5*d.* and Suzuki 5*s.* 4*d.* spot. The "New York Commercial" of July 21 states that the peppermint situation is attracting rather more attention, but there is no change in spot values. Advices to hand are to the effect that a thorough canvass of conditions in Michigan shows a left-over stock in growers' hands of about 130,000 lb., and that the acreage planted this year is only about two-thirds of last season's area. It is claimed, however, that with the left-over stock and even only a moderate yield this year there will be more than enough oil to meet consuming requirements.

Opium.—In London there is little business doing in Turkey opium, buyers continuing to hold aloof, there being great irregularity in prices. In new crop druggists' a small business has been done on the spot at 12*s.* for fine, but some holders ask 12*s.* 3*d.* Malatia is quoted 12*s.* 6*d.* to 13*s.* 6*d.* and Tokat at 13*s.* to 14*s.* 6*d.* The prices of Persian are well maintained, with sales of 10½ per cent. at 13*s.* 9*d.* to 14*s.* and 9½ per cent. at 13*s.* to 13*s.* 3*d.* spot. Conditions in primary markets in Persia appear to be firm. It is also said that Hong-Kong is a buyer here.

Writing to us on July 16, a Smyrna correspondent reports an easier market, sales amounting to twenty-seven cases new crop at from 9*s.* 6*d.* to 11*s.* per lb. Prices for old druggists' are maintained at between 11*s.* and 12*s.*, but as new opium is much better value, there are no buyers of old, and it is evident prices of the latter will have to be reduced more in accordance with market conditions. There is nothing to be added to the estimate of the new Turkey crop (see *C. & D.*, July 17, p. 95). The harvest is going on apace in the upper districts, and from all accounts the yield for the moment leaves nothing to be desired. New opium gives from 10 per cent. to 11 per cent. morphine, but selected Yerli and other soft grades may exceed this by ½ per cent. to 1 per cent. Arrivals to date amount to 395 cases against 427 cases. Writing on July 17, a Smyrna correspondent states that the transactions during the previous fortnight, though not of great importance, would certainly have brought about an advance had not buyers evinced caution, preferring to operate singly, which fact enabled them to obtain slight reductions on each transaction. The sales comprised thirty-one cases new extra Karahissar t.q. at 99pts. to 93pts., or 30f. to 28.25f., equal to 10*s.* 11*d.*, 10*s.* 7*d.*, and 10*s.* per lb. c.i.f. European ports, the market closing with sellers at the lower price.

Otto of Rose.—It is anticipated that the result of the so-called "fixing" of prices will be announced in a week or two, and that they will be in favour of buyers. So far no business is reported in new crop, those who have orders to place preferring to wait.

Pepper (Black).—At auction 18 cases Tellicherry sold at 3½*d.* for fine heavy, and 100 bags ditto were bought in at 3½*d.* Privately fair Singapore is quoted 3⅜*d.*, and a good business has been done in August-October shipment at 3 3/32*d.* c.i.f., closing sellers on Wednesday at 3 7/32*d.* c.i.f. for January-March.

Pepper (White).—Nothing offered at auction. Privately sellers of fair Singapore ask 5¼*d.* spot, and for arrival a good business has been done at 4 11/16*d.* c.i.f. for August-September, and at 4 13/16*d.* c.i.f. for January-March, closing sellers.

Quinine.—At the auction held by the Amsterdam Quinine Works on Friday, July 23, 1,417½ kilos sulphate were offered, of which 1,275.75 kilos (45,000 oz.) were sold at an average price of 10.51fl. per kilo., against the same price paid at the previous auction. The next auction will be held on August 13, and will consist of 50,000 oz. The exports of "quinine, quinine salts, and combinations" from Germany during the five months ending May amount to 55,100 kilos, against 60,400 kilos in 1908, and 97,400 kilos in 1907. In London prices remain unaltered at 7½*d.* for German sulphate from makers and 7*d.* from second hands.

Shellac.—Quiet and unaltered on the spot at from 68*s.* to 69*s.* for TN.

Tragacanth.—A moderate business has been done in most descriptions at about steady rates, and stocks of Bagdad qualities (with the exception of qualities over 12*l.*) are now small. Considerable sales of Persian thick hoggy sorts have been made, also Persian fourths at 8*l.* 5*s.* per cwt. Bagdad firsts are quoted 15*l.* 5*s.* to 16*l.*, seconds 14*l.* to 14*l.* 15*s.*, thirds 11*l.* to 13*l.*, and fourths 8*l.* 10*s.* to 10*l.* per cwt.

Turpentine has fluctuated considerably, closing at 35*s.* 9*d.* spot for American, and at 36*s.* 9*d.* for September-December.

Heavy Chemicals.

Business in the heavy-chemical market at the moment is on the quiet side, new orders being few. Deliveries against existing contracts, however, are a good average. Values are steady and are well maintained, without appreciable fluctuations.

Alkali-produce.—Main products are in fair request, and inquiries are coming in for bleaching-powder and caustic soda on forward account. Yellow prussiates, ammonia alkali, soda crystals, and salt cake are moving steadily, but chlorates are dull.

Sulphate of Ammonia.—The market at present is quietly steady, but prompt parcels offering are being well taken up. Quotations stand nominally unchanged, and nearest present figures are: Beckton prompt 11*l.* 7*s.* 6*d.*, Beckton terms 10*l.* 18*s.* 9*d.* to 11*l.*, London 10*l.* 18*s.* 9*d.* to 11*l.*, Leith 11*l.* 5*s.* to 11*l.* 6*s.* 3*d.*, Liverpool 11*l.* 2*s.* 6*d.*, and Hull 11*l.*

Lead Products are scarcely moving so well as they were, but prices are steadily maintained. White acetate of lead 23*l.* 5*s.* to 23*l.* 10*s.*, and brown acetate of lead 18*l.* 10*s.* to 18*l.* 15*s.* Nitrate of lead 25*l.* 5*s.* to 25*l.* 10*s.*, all less 2½ per cent. Glasgow. White lead 16*l.* 10*s.* to 16*l.* 15*s.*, and red lead 15*l.* 10*s.* to 15*l.* 15*s.* per ton Tyne.

Barium Products are in good average request, though perhaps not moving quite so well as they were. Prices rule steady. The mineral carbonate of barytes or witherite in all qualities is still very scarce, and fully sold for some time to come. Blanc fixe, pure precipitated sulphate of barytes in paste form, 6*l.* 15*s.* to 7*l.* 10*s.* per ton in usual casks. Mineral sulphate of barytes in steady request at prices varying from 40*s.* to 100*s.* per ton, according to quality, quantity, and package. Chloride of barium, ordinary refined crystals in casks, 7*l.* to 7*l.* 10*s.* per ton. Crude calcined sulphide of barium 70 to 75 per cent., 5*l.* 5*s.* to 5*l.* 17*s.* 6*d.* per ton. Hydrate of barium, purest crystals, 13*l.* 10*s.* to 14*l.* 10*s.* per ton in 6 to 7 cwt. casks. Fused concentrated barium hydrate, 56 to 60 per cent. BaO in 5 to 6 cwt. drums, 13*l.* 15*s.* to 15*l.* per ton. Crushed concentrated quality in special drums about 3 cwt. each, 30*s.* per ton extra.

Manchester Chemical-market.

July 27, 1909.

There was only a moderate attendance on the Exchange to-day, and business in most departments was very dull. There was little change in heavy chemicals, and inquiry was slow. Recovered sulphur was in better demand at 5*l.* to 5*l.* 5*s.* per ton on rails. Muriatic acid quiet. Acetate of lime fairly steady. Green copperas is offering more freely, and prices are rather in buyers' favour. White powdered arsenic quiet at 12*l.* 7*s.* 6*d.* to 12*l.* 12*s.* 6*d.* per ton here. Lead salts still firm. Sulphate of copper shows little change on the week, and may be quoted 18*l.* 15*s.* to 19*l.* per ton, delivered Manchester. Coal-tar products quiet generally. Sulphate of ammonia for prompt delivery 11*l.* per ton on rails Manchester. Benzols firm.

Correspondence

TO CORRESPONDENTS.—A letter for publication should always be a distinct communication; nothing else should be mixed up with it. Each query - no matter whether legal, dispensing, or general—should stand by itself, and the paper upon which it is written should always be backed with the shop stamp. We do not undertake to reply to queries by post. Write clearly and concisely on one side of the paper only. All communications should be accompanied by the names and addresses of the writers. Publication of letters does not imply our agreement with them. Letters received after Wednesday morning cannot as a rule be dealt with in the current week's issue.

BUSINESS INFORMATION.—We supply by post (when a stamped and addressed envelope is provided) information as to the makers or agents for articles connected with pharmacy and the chemical and drug trades. Inquiries regarding any articles which cannot be traced are inserted under "Information Wanted."

Companies in Ireland.

SIR,—In reply to a correspondent in yours of July 24 who objects to my argument *re* lawyers, I can see no difference between the cases, and it is only by pushing it to its conclusion that one can prove one's case. Of course, if it suits your correspondent, for private or monetary reasons, to convert his business into a limited company, he probably pockets the cash and takes the risk. As far as Sir Thos. Robinson goes, I have met him on a few occasions, and bear him no grudge, nor did I find any ill will against him at 67 Mount Street; but let Mount Street speak for itself. As for "petty privilege and monopoly," I think it is but a small mind would descend to such matter. My contention is that we were called into existence by an Act of Parliament which we did not seek, and by study and ability we qualified ourselves by examination to claim such benefits (?) as the Act gave us. Nearly all we have studied for has been given away to the limited companies through misinterpretation of the Act, except the one privilege of the apprentice clause, and this we will not surrender. The companies seek by undue pressure in Parliament to be enabled to do what they are either unable or, perhaps more correctly, disdain to do—namely, to qualify themselves by examination. Yours truly,

Cork, July 27. RICHARD BLAIR.

[Other letters on this subject are unavoidably held over.—EDITOR *C. & D.*]

The New Certificate.

SIR,—I was a candidate at the recent Minor examination held in Edinburgh, and should very much like to draw attention to some matters which came under my observation. Among other successful students, I was a fortunate (?) recipient of a piece of semi-brown paper indicating the fact that I was fitted to be duly registered as a chemist and druggist. Before the Pharmacy Act of 1908 came into force, the certificates were not very attractive, but they had much interest inasmuch as they contained the respective signatures of the Board of Examiners—*e.g.*, Dr. Dobbin, Professor Bower, etc. Another point which is worthy of notice is the manner in which the distribution of certificates is carried out. This associates one's ideas with the handing out of cheap advertisement-bills on the street. Those who have been up at York Place know, to their disgust, that the duty of handing over the certificates is detailed to the porter. Surely this is an insult to students who have striven hard to obtain the Minor qualification. I would suggest that the Executive consider the advisability of instituting an official handing out of papers at a meeting which could be arranged to take place in the rooms on the evening of the second day. Why, at a dispersal of the school at the vacation time there is usually a ceremony with a local celebrity presiding! How much more may the qualified pharmacist expect a little gentlemanly treatment from those who are his equals, since they are elected to the Executive from the ranks of pharmacists. Hoping some others who feel or have felt the indignity heaped upon them will take up the same attitude, for only by this means can matters be rectified, JAMES M. SPEIRS.

A Chemists' Dental Society.

SIR,—I would willingly join a society for the uniting of chemist extractors and forming ourselves into a compact body. The Chemists' Defence Association could act for us in legal matters, but, on the other hand, we should combine in order that, in the event of any legislation by the Dental Association, the combination could prove its existence in a tangible way.

Yours truly,

CHEMIST-DENTAL. (120/44.)

Store *v.* Private Assistants.

SIR,—With reference to the letters of "Verb. Sap." and others, if Mr. Boot is allowed to be the supreme judge of ability he is quite right in clamming a monopoly of the best men. The members of Mr. Boot's retail staff resemble the German soldiers—they are smart, well drilled, and trained to do just what they are told, the thinking being done at headquarters. When Mr. Boot gets the man he wants he treats him exceptionally well, and the post is practically secure for life. On the other hand, the clever, ambitious, energetic man, the man of fighting instincts, is not wanted, and if by chance he enters the firm seldom remains long. Many of the men who leave Mr. Boot would make almost ideal managers for private businesses, and if chemists could only see this, instead of offering the posts to the lowest bidder, irrespective of merit, we should hear less about branches not paying. Yours faithfully,

ATHOS. (119/20.)

Apothecaries' Assistants.

SIR,—Your correspondent in last week's issue seems to base his chief plea for the admission of apothecaries' assistants to registration as chemists and druggists upon the fact that they have been filled with good intentions towards the Minor. In this respect unsuccessful Minor candidates have a better claim. But good intention is no argument. Then we are asked to think of the wife and children of the man of good intention. A sad plight in all conscience, but what of the wife and children of the Minor man whose market value will be considerably reduced by the influx of this cheaper labour? The Hall certificate represents cheaper labour, as the average salary offered by public institutions is sorry proof. There must be no false sentiment, and assistant pharmacists are justified in taking the strongest possible stand on this question, which represents their living, and the case must be presented to the Pharmaceutical Society in this light. To admit apothecaries' assistants on the terms proposed is to make the title "Pharmacist" a thing of little value and the qualification a vain delusion. The proposal of the Society of Apothecaries is audacious, and demands a spirited protest on the part of those who stand to suffer most by it. Many assistant pharmacists have an uncomfortable feeling that with the influential pressure which will be brought to bear from the Society of Apothecaries and the Army Department, and with the assistants' view unrepresented, the Council may allow of the interpretation of Clause B in such a way as to constitute a grave injustice to Major and Minor men. If we are to uphold the dignity of the Council at the cost of a loss of all the advantages of qualification, then it is time to cry a war upon dignity.

Yours faithfully.

July 26. SMILAX. (120/65.)

Lotio Hydrargyri Nigra.

SIR.—The B.P. formula for this preparation in the past has been complained of in your journal, and to my mind is far from satisfactory. I suggest the subjoined as a better formula. Yours truly,

BLACKWASH. (115/30.)

Sem. lini	ʒvj.
Hydrargyri subchlor.	ʒss.
Glycerin.	ʒss.
Liq. calcis	q.s.

Put the calomel in a test-tube, shake vigorously with a little lime-water, then transfer to a 10-oz. bottle, rinsing out the tube with more liq. calcis; shake again with 2 or 3 oz. more of lime-water, finally filling the bottle up with it, giving it a

good and last shake, set aside until the mercurous oxide has completely deposited. Put the linseed into a flask, pour the clear solution on to the seed, allow it to stand for twelve hours, occasionally giving a shake round. See that the mucilage thus made is clear; mix the glycerin with it, then add to the mercurous oxide in the bottle, filling up with lime-water.

Dispensing Notes.

Zinc Valerianate Pills.

Sir,—What is the best way to dispense the following pills?—

Zinci valerianat.	gr. xxiv.
Acid. salicyl.	gr. xxiv.
Ext. belladon.	gr. vj.
Ammon. valerian.	gr. xxiv.
Ext. viburn. prun.	gr. xij.

Ft. pil. xxiv.

As written it forms a thin sticky mass utterly impossible to form into pills.

Yours truly, Perplexed. (108/26.)

[The best way to make this pill is to add a sufficiency of powdered marshmallow root or powdered liquorice and divide into two—directing two to be taken instead of one. Mix the valerianates together with some of the inert powder used; also the extracts and acid with some of it, and mix the two lots. If the ingredients be mixed without any diluent the ammonium valerianate is decomposed to a greater extent than in this way. The water of crystallisation in the ammonium valerianate is the chief cause of the trouble, and the salt cannot be dried on account of its volatility. We have tried the prescription in various ways, and we are of opinion that the method we have suggested is the one most likely to give the best results pharmaceutically and therapeutically. Send out in a vial.]

Legal Queries.

Crib (119/28).—An Irish registered druggist cannot keep open shop in England, nor can an Irish pharmaceutical chemist. Similarly, chemists and druggists and pharmaceutical chemists of Great Britain cannot keep open shop as such in Ireland.

J. W. (118/3).—As far as we are aware the title is descriptive and not registered as a trade-mark, but it would be necessary to search the registers as to the latter point, and the official fee for that is 1*s.* per quarter of an hour. We do not undertake such searches. The titlo appears to be commonly used, usually in association with the name of a manufacturer or vendor.

A. H. J. (119/41).—An unqualified man may now, as before the Poisons and Pharmacy Act came into force, retail non-poisonous sheep-dips, whether approved by the Board of Agriculture or not. The Act provides a licence for unqualified persons who desire to sell by retail sheep-dips containing arsenic or the alkaloids of tobacco, but no other sheep-dip containing a scheduled poison can be sold by unqualified or licensed persons.

Miscellaneous Inquiries.

We endeavour to reply promptly and practically to trade questions of general interest, but cannot guarantee insertion of replies on a particular day, nor can we repeat information given during the past twelve months. A preliminary condition for reporting on samples submitted is that all particulars as to source and uses are given to us.

Canuck (112/38).—Galvanised-iron Roofs treated with crude coal-tar show signs of decay after a time owing probably to the corrosive substances in the tar. It is usual to paint the corrugated-iron sheets, but where the sheets are new some preparation is necessary to make the paint adhere. The following wash is employed:

Copper chloride	1 oz.
Ammonium chloride	1 oz.
Hydrochloric acid	2 oz.
Water to	60 oz.

This solution darkens the surface of the zinc, and twelve hours afterwards ordinary paint may be employed. If the zinc has been exposed to the weather for three or four months the preliminary wash is not needed. Special paints are also sold which can be used on new zinc, and which adhere perfectly without the necessity of preparing the surface. Refer also to *C. & D. Diary*, 1908, p. 214.

Farmer (106/23).—Tapeworm in Sheep.—In the *C. & D.* for June 19 there is a very effective and practical prescription for tapeworm in sheep, but as you have over 200 to treat, and wish them done at a cheap rate, you might try the following, which will prove effectual at a minimum cost:

Ferri sulphat.	ʒij.
Ol. terebinth.	ʒij.
Tr. asafetidæ	ʒij.
Ol. lini ad	ʒvj.

M.

To be given at one dose to sheep.

A liberal supply of rock salt put into the feeding-troughs or spread over the pastures will materially assist not only in curing but in preventing. The sheep might also be removed to clean pastures and lime sown over the fields they have been in. As far as practicable keep off all dogs, and a thorough look-out must be kept for the worms, and if possible they should be gathered and burnt. The worm may measure twenty yards. The segments are short, broad, and transparent, and contain two genital pores on their margin.

Farnham (118/18).—Old morphine acetate may be utilised as you suggest, or you may use it for your own mixtures, adding sufficient acetic acid to dissolve it. The loss on keeping is acetic acid; the alkaloid does not change.

E. M. M. (118/32).—Internal Piles.—The use of cold water injections every morning for internal piles will do no harm, even if used continuously. A good plan is to inject an ounce of olive oil before getting out of bed, and after the bowels have moved inject a few ounces of cold water. The piles can be easily removed by a simple surgical operation.

Hants (118/23).—Lawn Sand.—An effective preparation is as follows:

Calcium acid phosphate ...	1 lb.
Ammonium sulphate (crude) ...	5 lb.
Sand	4 lb.

Mix.

Alii Fiat Lux (119/10).—The chapter in "Pharmaceutical Formulas" on the Manufacture of Aerated Waters gives as much information as you can get in the available text-books dealing solely with this subject, but the chapter may be supplemented by references to the books published by manufacturers of soluble essences—*e.g.*, Messrs. W. J. Bush & Co., Ltd., and Messrs. Stevenson & Howell, Ltd., who supply their customers with useful manuals of instruction.

H. W. (121/17).—(1) Mildew Spots can be removed by a weak solution of chlorinated lime—say, 1 in 20—followed by vinegar or a weak acid solution. (2) Aerated Sodium-citrate Water.—You do not say whether this is to be used by adults or children. If for adults, 10 grains to the pint will be quite sufficient, and aeration will not affect its therapeutic action.

S. (114/35) puts up the following Combined Toning and Fixing Bath:

No. 1.

Sodium hyposulphite	7 lb.
Lead acetate	1 lb.
Boiling distilled water to	3 gals.

No. 2.

Gold chloride (Johnson's best) ...	96 grains.
Distilled water to	1 gal.

Neutralise with creta præparat.

Add No. 2 solution gradually to No. 1, shaking well after each addition. Let stand for a day, and filter bright.

His objection to it is that it goes on depositing. [We have made many experiments with combined baths, and find that it is impossible to get a good working bath that does not precipitate. The addition of citric acid (added to the hypo. solution and boiled) brings down a ppt. of sulphur, which simply weakens the fixing quality of the bath without serving any really useful purpose. The best way to get over the difficulty of filtering before selling is to make a large quantity of the bath and give it a month or two to settle down. Always boil, as this hastens the precipitation of the lead sulphide, which would otherwise take nearly twelve months to completely precipitate out. Extra gold in the formula is no advantage, rather the reverse, as the more gold the quicker the toning and the less fixing. Your formula is far more serviceable than the one to which you refer.]

Smallpox.—According to a Reuter telegram, Drs. Henrique Beaurepaire de Aragao and Prowazell have discovered the "microbe" of smallpox in the course of other researches at the Oswaldo Cruz Institute at Rio de Janeiro.

Macassar Sandalwood.—During 1908 11,309 piculs was shipped from Macassar, against 4,899 piculs in 1907 and 4,879 piculs in 1906. A large quantity is exported, on through bill of lading, from Sandalwood Island and Timor, of which no record is obtainable at Macassar. The bulk of this article finds its way to Hong-Kong, the United States, and France.

MEGGESON & CO.
LTD.

14 & 15 MILES LANE,
UPPER THAMES ST., LONDON, E.C.
Telegrams: "Meggeson London." Telephone No.: 687 Bank.

Manufacturers of
Medicated Lozenges, Jujubes, Pastilles, Refined Liquorice, Cachous, and Acidulated Drops.

SOFT GLYCERINE
and
Glycerine and Black Currant Pastilles.
Prepared with New Special Soft Basis.

These Pastilles are exceedingly popular; they will not harden or adhere together by keeping, and retain their bright appearance and flavour indefinitely. Supplied in 1-lb. Free Tins.

Price 2/- per lb.
1/9 per lb. for 14-lbs.

Antiseptic Throat Pastilles (Crystallized).
Antiseptic, Stimulating and Expectorant.

Containing Red Gum, Benzoic Acid, Menthol, Eucalyptus Oil, etc., flavoured with Virgin Otto Rose. A most palatable combination, highly efficacious in all catarrhal conditions of the Pharynx and inflammatory Throat Troubles.

Price 2/6 per lb.

Bronchial Pastilles
(Crystallized).
A TONIC THROAT PASTILLE.

Containing Chlorodyne, Glycerine, Cayenne, etc.

Price 1/6 per lb.

All the above supplied in 6d. & 1s. Tins. Customer's Name & Address on labels FREE of extra charge.

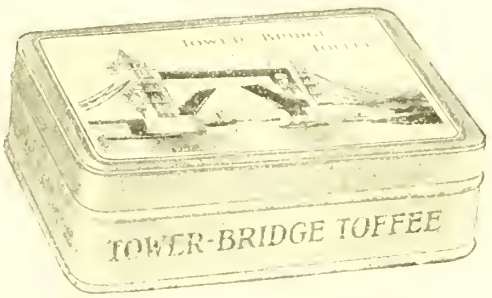
A Variety of other Medicated Pastilles and Jujubes, Antiseptic, etc., kept in stock.
SAMPLES AND PRICES ON APPLICATION.

Formalin Throat Lozenges.



The New Remedy for Septic Throat, Catarrh, &c.
Price 2/6 per lb. 6/- per doz.
In Screw Cap Bottles as Fig.

Tower Bridge Toffee, HOME-MADE.



An Attractive and Dainty Confection.

Price 7d. per lb. in bulk.
,, 4/- nett per doz. tins as Fig.

AN ENTIRELY ERRONEOUS IMPRESSION APPEARS TO PREVAIL AMONC SOME PHARMACISTS THAT OUR CHEMICALS, THOUCH ADMITTEDLY OF THE FINEST QUALITY, ARE ONLY OBTAINABLE AT CONSIDERABLY HICHER PRICES THAN OTHER BRANDS.

WE THEREFORE BEC TO DRAW ATTENTION TO THE LIST OF OUR MANUFACTURES ON THE OPPOSITE PACE, EVERY ONE OF WHICH IS SOLD BY US TO WHOLESALE DRUGCISTS AT PRICES EQUAL TO, AND IN MANY CASES LOWER THAN, THOSE OF OUR COMPETITORS.

IF YOU SPECIFY OUR CHEMICALS YOU CAN ABSOLUTELY RELY ON WHAT YOU ARE USINC. THE QUALITY DOES NOT VARY, AND DISPENSING BECOMES SAFE, CERTAIN AND ACCURATE

HOWARDS & SONS, LTD.
STRATFORD, LONDON, E.

HOWARDS'

ACETATES.

ACID. CITRIC.

ACID. HYDROBROM. PUR.

ACID. HYDROCHLOR. PUR.

ACID. NITRIC. PUR.

ACID. PHOSPHORIC. PUR.

ACID. SULPHUROS PUR.

ÆTHERS, PURE AND METHYLATED

AMMON. BICARB

ANTIMONY PREPARATIONS.

BISMUTH PREPARATIONS.

CAFFEINE.

CALCIS CARB. PRÆCIP. P.B.

CAMPHOR BELLS, BLOCKS AND FLOWERS.

CINCHONA ALKALOIDS.

FERRI ET AMMON. CIT.

FERRI ET QUININ. CIT

IODIDES.

IODOFORM.

LIQ. BISMUTH. ET AMMON. CIT.

LIQ. FERRI PERCHLOR. FORT.

LITHIA CARB.

MANGANESE BORATE.

MERCURIALS.

POTASS. CITRAS.

POTASS. CITRAS GRAN.

POTASS. ACETAS.

POTASS. ACETAS GRAN.

POT. SULPHURATA.

QUININE SALTS (OTHER THAN SULPH.)

SODA TART. P.B.

SODII CARB. CRYST. P.B.

SODII PHOSPH. P.B.

SODII PHOSPH. GRAN

SPIRIT. AMMON. AROMAT.

SPIRIT. ÆTHER NIT.

SULPH. PRÆCIP. VER. P.B.

TEREBENE PURISS.

ZINC PREPARATIONS.

AND MANY OTHER PHARMACEUTICAL PREPARATIONS.

HOWARDS & SONS, LTD., STRATFORD, LONDON, E.

South African Trade

JOHN MURDOCH & CO.

Tel. Address: "Otoscope" London.

All Codes Used

Sussex House,
52 LEADENHALL STREET,
LONDON, E.C.

Shippers of Drugs, Chemicals, Druggists' Sundries, Patent Medicines, Photographic and Optical Goods, Surgical and Dental Instruments, :: :: Confectioners' and Mineral Waters Requirements, &c. :: ::

Act as London Agents for the Leading Firms of Wholesale Chemists and Druggists throughout South Africa.

Are prepared to accept Sole Agencies and energetically push good Selling Specialities.

Have correspondents carrying wholesale stocks in—and make direct shipments to the following principal towns:—

CAPE TOWN
PORT ELIZABETH
EAST LONDON
KIMBERLEY
QUEENSTOWN
OUDTSHOORN
CRADOCK
PRETORIA
JOHANNESBURG
BLOEMFONTEIN
PIETERMARITZBURG
DURBAN
VRYHEID

Travellers constantly visit smaller towns and country districts of **Cape Colony, Natal, Transvaal,** and **Orange River Colony.**

Firms desirous of pushing South African trade should consult us.

B. A. SMITH & CO., 4 CHURCH ROW, ALDGATE, LONDON, E.C.

(HENRY BOYCE, Manager), AGENTS FOR

JOH. DIEDR. BIEBER, HAMBURG:

Tinctures, Ethers, Liniments, and **Spirituous Extracts, &c.,** prepared with purest Spirit, and from best quality of raw Drugs, in accordance with requirements of British and other Pharmacopœias, **Iodoform** (absolute), **Iodine Resublimed, Potassium Iodide, Sodium Iodide,** all Preparations of **Bromine, Santonin** (from Turkestan factory), **Cocoa Butter, Castor Oil, Chloroform, Cod Liver Oil, Resina Jalapæ, Resina Scammoniæ.**

DE DIETRICH & CO.'S ACID-PROOF ENAMELLED CAST IRON APPARATUS,

Standing the strongest corrosives and highest pressures, for the Chemical and kindred industries.

R. SCHUCHARDT, TRIESTE: Insect Powder, Insect Flowers, &c.

CARL KELLNER, ARLESBERG (in Thür.): Thermometers and Chemical Glassware.

Health, Strength and Energy.

PLEASE REMEMBER THAT

DR. LALOR'S PHOSPHODYNE

Is the Original and Genuine Phosphoric Tonic
with Forty years' world-wide reputation.

OF ALL CHEMISTS AT 4/6 AND 11/-

Other Specialities: DR. LALOR'S PILLS.
DR. LALOR'S HEALING OINTMENT.

Dr. Lalor's Phosphodyne Laboratory, Hampstead, London, N.W.

HORNER & SONS

ESTABLISHED FOR OVER TWO HUNDRED YEARS

Ol. Iridis Concrete.

Ol. Santal Flav. Ang.

HAVE THE BEST REPUTATION

For the Excellence and genuine quality of all articles supplied, and for the Careful Attention given to all orders received by them from all over the World.

IMPORTERS OF

CAMPHOR
COD LIVER OIL
COPAIBA
BERGAMOT OIL
LEMON OIL
OPIUM
SASSAFRAS OIL
OTTO OF ROSES
RHUBARB
VIRGIN SCAMMONY

AND ALL OTHER CRUDE DRUGS.

VITTORIA LIQUORICE JUICE
POWDERED DRUGS
ESSENTIAL OILS

All Patent Medicines and Industrial Articles sold on commission basis.

MEDICINAL CHEMICALS.

TRADE MARK HORNER & SONS NITOR IN ADVERSIS LONDON

PHARMACEUTICAL PREPARATIONS.

Samples and Quotations on Application.

24 GEORGE ST., TOWER HILL, E.C.

LATE OF { MITRE SQUARE, ALDGATE, E.C. AND 20 BUCKLERSBURY, E.C.

INDIA.

Messrs. SMITH, STANISTREET & CO.
WHOLESALE CHEMISTS, &c.
CALCUTTA

possess exceptional facilities for introducing new remedies to the Medical Profession in the eastern half of India, having as clients practically every medical man of repute, and every hospital in Bengal, Assam, the Central Provinces, United Provinces and the Punjab. Messrs. S. S. & Co. are also prepared to undertake wholesale agency for established Proprietary Remedies in the provinces specified. Messrs. S. S. & Co. are sole wholesale agents for Bile Beans, Zam-Buk, Collis Browne's Chlorodyne, Doan's Medicines, Jeye's Cyllin, and other goods in large demand. Agency terms on application.

UNGUEMOL

A fatty Ointment-basis, miscible with water in all proportions.

(REGISTERED)

The introduction of Unguemol marks a new era in galenic pharmacy. It is a translucent, bland fat, which is readily absorbed, and which on removal leaves the skin smooth and supple.

The ease with which Unguemol combines with water is demonstrated by applying a little to the back of the hand, adding simultaneously water, drop by drop. A cream will gradually form, and this may be entirely rubbed in, or completely washed off with more water.

The unusual property of forming a *natural* emulsion with water or dilute alcoholic liquids pre-eminently adapts Unguemol for general use. No other fat possesses this unique property of combining directly with water. It enables quite a small amount of ointment or liniment to be applied over a large area, while should excess be used and soak into the underclothing, it may be easily washed out again.

For the preparation of creams in which advantage is taken of the cooling effect due to evaporation, Unguemol is unrivalled. Water or spirituous liquids may be incorporated to any extent; in fact, if the liquid is added by degrees, Unguemol may be diluted to the consistence of a thin milk.

PREPARED ONLY BY **JOHN BELL, HILLS & LUCAS LTD.,** Oxford Works: TOWER BRIDGE ROAD, LONDON, S.E.
(Established by John Bell in 1798, at 225 Oxford Street, W.)
West End Depot: JOHN BELL & CROYDEN LTD., 50 WIGMORE STREET, W.

C. F. Boehringer & Soehne, *Mannheim Waldhof, Germany.*

B. & S. BRAND.

COCAINE BOEHRINGER.

B. & S. BRAND.

SULPHATE OF QUININE AND ALL CINCHONA PREPARATIONS.

Acetanilid, Antipyrine, Atropine, Caffeine, Chloral-Hydrate, Codeine, Coumarine, Eserine, Guaiacol, Hydrastine, Hydroquinone, Lactophenine, Phenacetin, Pilocarpine, Pyrogallic Acid, Resorcine, Santonine, Terpin-Hydrate, Veratrine, etc.

Agents for England & Ireland: Messrs. Domeier & Co., 8 Harp Lane, London, E.C.
Agents for Scotland: Messrs. F. R. Müller & Co., 47 Waterloo Street, Glasgow

Wires: "POEM HULL."

PREMIER CASTOR OILS

ALL GRADES AND PACKAGES.

Manufactured by
PREMIER OIL EXTRACTING MILLS, LIMITED,
HULL, England.

PRICE 14s. NET.

SQUIRE'S COMPANION

TO THE BRITISH PHARMACOPŒIA.

18th EDITION.

The Chemist and Druggist says: "Virtually a new book, unequalled in the English language for its treatment of practical pharmacy and pharmaceutical chemistry."

The Zeitschrift fur Angewandte Chemie says: "An excellent work of reference and a valuable 'COMPANION.'"

The Analyst says: "To anyone concerned in the analysis of drugs, the volume before us may be considered as a new work, and as regards the analytical side of the subject, it is safe to say that there is no single volume in the English language dealing with drugs which contains more information within its covers."

A special leaflet descriptive of the volume, and containing a selection of press notices, post free on application.

Chemists can obtain single copies at the trade price of 12s. 6d.

Copies can be obtained of any Wholesale Druggist, of the Publishers J. & A. Churchill, 7 Great Marlborough Street, London, W.; or from Squire & Sons.

SQUIRE'S STANDARD PREPS.

Premier Phosphate Preparations.

FEROCAL. (SQUIRE'S CHEMICAL FOOD.)

A permanent bright fluid food. Unrivalled in supplying the bone phosphates so necessary for the diet of quickly growing and delicate children.

Dose—Half to one teaspoonful in half a wineglassful of water twice daily after meals.

FEROCALETTES.

A condensed adjunct to the food of delicate children in a convenient and palatable form.

Dose—One Ferocalette twice or three times a day for children of two to six years; above this age two may be given twice a day.

GLYPHOCAL. SYRUP. GLYCEROPHOSPH. CO. (SQUIRE).

The best method of administering the Glycerophosphates.

Dose—One to two fl. dr. = 3·6 to 7·1 c.c.

GLYPHOCAL with STRYCHNINE.

Each fl. drm. (3·6 c.c.) contains $\frac{1}{150}$th grain of Strychnine.

Dose—One to two teaspoonfuls.

GLYPHOCAL with FORMATES.

A compound Elixir of the Glycerophosphates with the Formates.

Dose—One to two fl. dr. = 3·6 to 7·1 c.c.

GLYPHOCAL with FORMATES and STRYCHNINE.

Essentially a general reconstructive.

Dose—One to two fl. dr. = 3·6 to 7·1 c.c.

GLYPHOCAL with HÆMOGLOBIN.

A reliable and scientifically prepared solution of the Glycerophosphates with Hæmoglobin.

Dose—One to two fl. dr. = 3·6 to 7·1 c.c.

Ferruginous Fluids.

FERMANGLOBIN.

A fluid preparation containing Hæmoglobin.

Dose—One teaspoonful to a dessertspoonful.

FERMANGLOBIN with NUX VOMICA.

Dose—One teaspoonful to a dessertspoonful.

FERMANGLOBIN with ARSINYL.

Dose—One teaspoonful to a dessertspoonful.

MALTOGLOBIN.

A palatable and readily assimilable Elixir.

Dose—One dessertspoonful to a tablespoonful.

MALTOGLOBIN with ARSENIC.

Dose—One dessertspoonful to a tablespoonful.

Active Aromatic Aperients

KASAK ELIXIR.

A palatable preparation of Cascara Bark, free from objectionable bitterness.

Dose—One tablespoonful.

KASENA.

A well-adjusted and useful combination of Cascara and Senna.

Dose—One teaspoonful to a dessertspoonful.

SENNINE. OR NEW SYRUP OF SENNA (SQUIRE)

An excellent aperient for children and delicate persons.

Dose—One teaspoonful.

Corisol Compounds.

CORISOL.

A preparation of the active principle of the Suprarenal gland, made with a soft mineralised basis.

CORISOL INHALANT.

An oleaginous fluid Preparation suitable for use with an Atomiser.

CORISOL POWDER.

Prepared for use as a Snuff, or with an Insufflator.

SQUIRE & SONS, CHEMISTS ON THE ESTABLISHMENT OF THE KING, 413 Oxford Street, London, W.

Fellows' Hypophosphites

THE PHYSICIAN OF MANY YEARS' EXPERIENCE knows that, to obtain immediate results in the treatment of Anæmia, Neurasthenia, Pulmonary Tuberculosis, and wasting diseases of childhood, and also during convalescence from exhausting diseases,

THERE IS NO REMEDY LIKE FELLOWS' SYRUP.

Many medical journals and text-books specifically mention it as being of sterling worth.

TRY IT, AND PROVE THESE FACTS.

SPECIAL NOTE.—Fellows' Syrup is never sold in bulk. It can be obtained of chemists and pharmacists everywhere.

"Food and Drugs Act."

GUARANTEE.

The Great Importance of the following points will appeal to all Chemists:

I. That the ***Quality*** of Drugs, Chemicals, and Galenicals should be of the ***very best.***
II. That Guarantees of Purity should be required from the Wholesale Houses.
III. That the Wholesale Houses should be those of ***standing,*** whose ***Guarantees are responsible,*** and whose ***identity is known.***
IV. That the Guarantee should be of sufficient scope to afford ***full protection.***

We have issued the following Guarantee for many years, and shall be glad to apply it to the invoices of any of our customers who may desire it:

We guarantee all B.P. articles charged in this invoice to conform to the standard of the British Pharmacopœia, 1898, unless otherwise mentioned; and that all other articles are genuine as described.

Date ..... (*Signed*) *RAIMES & CO.*

We should esteem the opportunity of meeting, quality for quality, any prices for Drugs and Chemicals advertised to the Trade, under equal conditions.

RAIMES & CO., Wholesale Druggists, YORK.

GLYCEROPHOSPHATES

Salicine, Lithia Salts, Mercurials, Chrysophanic Acid, Hypophosphites, Alcohol, Ether, Guaiacol, Creosote.

Chloralhydrate

Iodides

CHLOROFORM

Codeine, Cocaine, Caffeine, Eserine, Atropine, Hydrastine, Pilocarpine, Theobromine, Strychnia, Veratrine,

Merck's

Alkaloids, Extracts, and Chemicals for Medicinal, Analytical and Technical Purposes are the **Standards** for **Absolute Purity & Reliability.**

The Chemist's safeguard: Purity and Reliability guaranteed by specifying the Merck Brand.

Pyrogallic Acid, Hydrcquinone, Pyrocatechin, Gold Salts, and all other

PHOTOGRAPHIC CHEMICALS

Bromides

Antithyroidin, Bromipin, Dionin, Fibrolysin, Gelatina sterilisata, Jequiritol, Iodipin, Leukoformantin, Meningococcic Serum, Perhydrol, Proponal, Paranephrin, Pyoktanin, Stypticin, Tannoform, Tropacocaine, Typhoid Fever Diagnostic, Veronal.

Bismuth

E. MERCK, DARMSTADT, & 16 JEWRY STREET, LONDON, E.C.

ESTABLISHED 1775.

ALFRED WHITE & SONS

MANUFACTURING CHEMISTS

ACIDS, ÆTHERS, AND OTHER CHEMICALS
CAREFULLY TESTED AND PACKED FOR EXPORT

Cannot be surpassed for Excellence and Purity.

ACIDS *Pure and Commercial*
Acetic, Nitric, Hydrochloric, Sulphuric, &c.

ÆTHERS *Made from Duty-paid Spirit.*
" " Methylated Spirit.

ANTIM. CROCUS

BISMUTH SALTS

Special Prices for Quantity.

BISMUTH CARB., B.P. (FREE FROM NITRATES).

SP. ÆTHER. NIT., B.P.
(MADE FROM DUTY-PAID SPIRIT).

SP. AMMON. AROM., B.P.
(MADE FROM DUTY-PAID SPIRIT).

Liq. Ammonia, Soldering Fluids, &c., and Preparations of Alum, Animal Charcoal, Antimony, Baryta, Strontia, Zinc, &c.

PRICE LISTS FREE ON APPLICATION.

Offices and Warehouse:
28/31 ALLEN STREET, COSWELL ROAD, LONDON, E.C.
(LATE CASTLE STREET, SAFFRON HILL).
Works and Wharf:
YIEWSLEY CHEMICAL WORKS, WEST DRAYTON, MIDDLESEX.
Telegraphic Address: "Ether Methylated London." Telephone No.: 1315 Holborn.

EVANS

EVANS' Laboratories—the most extensive in the trade

EVANS' Coated and Uncoated Pills.
EVANS' Compressed Tablets.
EVANS' Concentrated Infusions and Decoctions.
EVANS' Essential Oils and Soluble Essences.
EVANS' Extracts (Fluid and Solid).
EVANS' Liniments.
EVANS' Liquors.
EVANS' Ointments.
EVANS' Pharmacopœia Wines.
EVANS' Scammony, Podophyllin, Euonymin, &c.
EVANS' Spirits of Nitre, Ammonia, &c.
EVANS' Syrups.
EVANS' Tinctures.

EVANS. Pioneers of Counter Adjuncts with Customer's Name and Address. (Send for List.)

EVANS. Druggist Sundries. Best value. Complete stock. (Send for List.)

EVANS. For Photographic Requisites of all descriptions. (Send for List.)

EVANS. For Patent Medicine and Proprietary Articles. (Send for List.)

"GRAND PRIX," St. Louis Exhibition, 1904.

EVANS SONS LESCHER & WEBB

LIMITED,

LIVERPOOL AND LONDON.

LACTIC ACID BACILLI for the METCHNIKOFF TREATMENT.

TRILACTINE TABLETS

(Registered Trade Mark) Extra Pharmacopœia XIII, page 845.

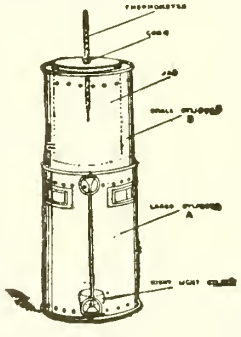
contain the active Lactic Acid Bacilli for this purpose. They are supplied in tubes, each sufficient for one day's treatment or for curdling milk. **Boxes of 8 tubes, each containing 6 tablets.** For one to two weeks' treatment, **4/6.**

For therapeutic use they are best taken in conjunction with a little sugar after meals—three to six per diem, or they may be used for curdling milk in the **Trilactine Outfit.** The milk thus treated is then taken with a little sugar.

Martindale's TRILACTINE OUTFIT

(Patent applied for.)

TRILACTINE OUTFIT.



Hitherto no really efficient means of preparing Lactic Acid Bacillus-Treated Milk has been obtainable at a reasonable cost.

The Trilactine Outfit is easily managed, and it is so regulated as to work in any climate.

It is very compact and portable. China jars, with special lids, to contain the Treated Milk are provided, which can be placed on the dining table if desired.

Either a quart or a pint and a quarter (or less) can be prepared at a time.

Trilactine-Treated Milk can be eaten alone, or with stewed fruit and cream and sugar, or either, according to taste.

Full and clear directions are issued with each apparatus.

Price.—With Pint Jar, **10/6**; or with Quart Jar only, **11/-**; or with Pint and Quart Jars, **13/-**. Post free in Great Britain, packed in Strong Box, **1/-** extra.

Extra Jars, complete with white metal lids (Pint), **2/-**; (Quart), **2/6**. Night Lights (Clarke's 9-hour), **9d.** per box; post extra.

A copy of a recently delivered experimental Lecture on the subject of Lactic Acid Bacilli Preparations and Treatment, by W. Harrison Martindale, Ph.D., will, with pleasure, be forwarded on request. This paper deals with the "last word" on the Method of Treatment now so much in vogue—provides methods for chemical and bacteriological examination of the milk when treated, and gives abstracts of the most recent medical literature bearing on Prof. Metchnikoff's researches.

W. MARTINDALE, MANUFACTURING CHEMIST

10 New Cavendish St., London, W.

Telephones—
Gerrard 4688 and Paddington 1797.

Telegrams—
"Martindale Chemist London."

We are asked to advertise our **Special Preparations.**

This is not a new occupation with us; on the contrary, we have been at it for a third of a century or more.

We are quite prepared to hear our retail friends classifying all Specialties as a—nuisance.

Our answer is that our Special Preparations advertise themselves and yield a handsome profit.

In addition to "Trilactine," which is the leading feature at the moment, and to which we have devoted the opposite page, the following are a few of our Special Preparations in demand.



Adrenicaine.
Amyl Nitrite Capsules.
Anæsthetic, Dental.
Anti-Asthmatic Tabellæ.
Apiol and Ergotin.
"Arsamin."
Bacteriological Apparatus.
Biniodide "Solubes."
Bon Voyage. phates.
Bone Marrow and Glycerophos-
Borated Hydrogen Peroxide.
Calmette's Test.
Chloro-Sodio-Magnes. Aper.
Cod Liver Oil Emulsion with Glycero-phosphates.
Compound Asthma Fluid and Vaporiser.
Compressed Dressings.
Compo. Dental.
Conephrin.
Coumaric Preparations.
Dressings, "Steriloid."
Effervescent Sodio-Magnesian Aperient.
Erythrol Nitrate Tabellæ.
Ethyl Bromide Capsules.
,, Iodide Capsules.
"Extra Pharmacopœia."
Fæxin.
Glycaphorm.
Glycerophosphates, Eff.
,, Elixir.
,, Glycerole of
,, Malted.
Glycetracta.
Granular Preparations.
Hæmoglobin Capsules.
,, Elixir.
Hazel Foam.
Hindu Dates.
Infants' Foods.
Iodum Oleatum.
Iodo-Tannic Syrup.
"Lithio."



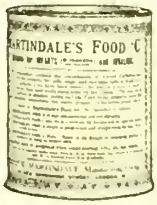
Lysoform Dental Dressing.
,, Mouth Wash.
,, Tooth Paste.
Malt Ext. with Oil and Comps.
Maltolivine.
Mannitol Nitrate Tabellæ.
Maricol.
Moss, Compressed.
"Methysal" Balm.
Migralgin Tablets.
Moskitin.
Nitroglycerin Tablets.
Nitroglycerin and Digitalin Tablets.
Nitroglycerin Compound Tablets.
Nitroglycerin and Sodium Iodide Tablets.
Ovules.
Pagenstecher's Ointment.
Pepsin, Lactated.
Peptonising Powders.
Perchloride "Solubes."
"Pura" Soap.
Quinine Pessaries.
Red Bone Marrow Tablets.
"Sedeff."
Soap Solution, Ethereal.
Sodium Coumarate Injection.
,, Nitrite Tablets.
Sodium Phosphate Effervescent
,, Sulphate Effervescent.
,, ,, Vesettes.
Solvine, Corn.
"Steriloid" Dressings.
"Sterules."
Thymaglycine.
"Tylmarin."
Wimpole Vaccines.



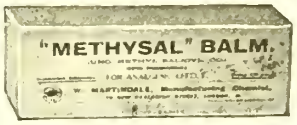












Details regarding any of the above will gladly be furnished.

Drugs, Chemicals, and Galenical Preparations supplied in competition with London, Provincial, or Foreign Houses.

Our List is replete with **"odd" lines,** which constitute a feature with us. You should receive a copy regularly; a postcard will arrange this.

We solicit your "Co-operation" in the matter of the Specialties and your esteemed orders for the Drugs, Chemicals, and Galenical Preparations.

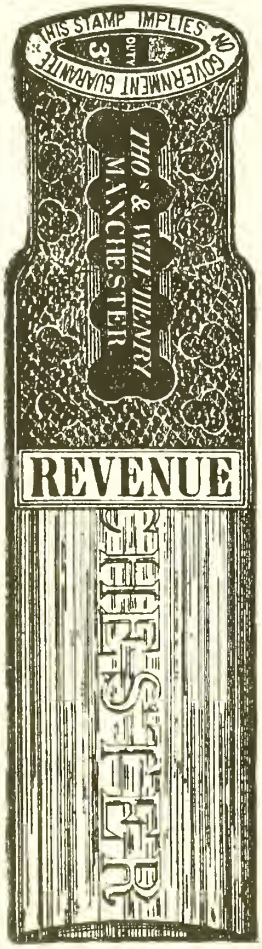
W. MARTINDALE, Manufacturing Chemist,

10 NEW CAVENDISH STREET, LONDON, W.

Telegraphic Address: "Martindale Chemist London." Telephone Nos.: Gerrard 4688. Paddington 1797.

ESTABLISHED A.D. 1772.

HENRY'S CALCINED MAGNESIA.



For HEARTBURN, HEADACHE, GOUT, BILIOUSNESS, ACIDITY OF THE STOMACH, TRY

Henry's Calcined Magnesia

FREE FROM TASTE, SMELL OR ROUGHNESS TO THE PALATE.

ADULTS.

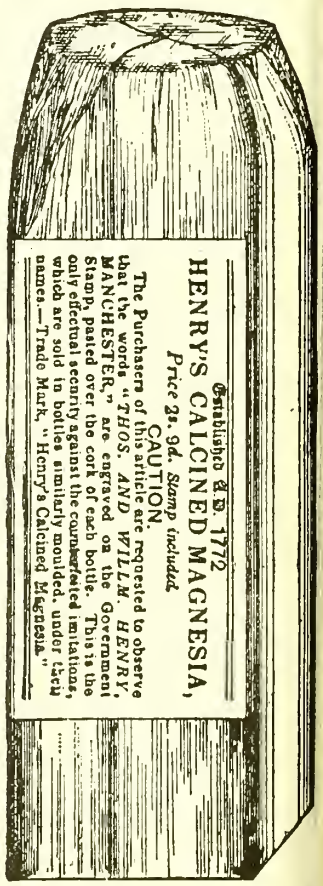
A Safe Aperient for the most delicate constitutions.

CHILDREN.

May be given to children in early infancy. The addition of a small quantity of the Magnesia prevents milk turning sour on the stomach.

MESSRS. THOMAS and WILLIAM HENRY, of Manchester, England, beg to inform the Trade generally that they continue to manufacture their old-established "CALCINED MAGNESIA" in the Greatest Chemical Purity, and also wish to warn Buyers against the numerous spurious and very inferior imitations offered in various foreign countries.

For the guidance of the Trade they submit facsimiles of their Bottle, wrapped and unwrapped.



THE LABELS CAN BE HAD IN ENGLISH, SPANISH, PORTUGUESE, OR ITALIAN

Messrs. HENRY will be pleased to hear from Merchants who are suspicious of any Stock in their possession.

THE MAGNESIA MAY BE HAD THROUGH ALL WHOLESALE HOUSES.

Registered Trade Mark:—"HENRY'S CALCINED MAGNESIA."

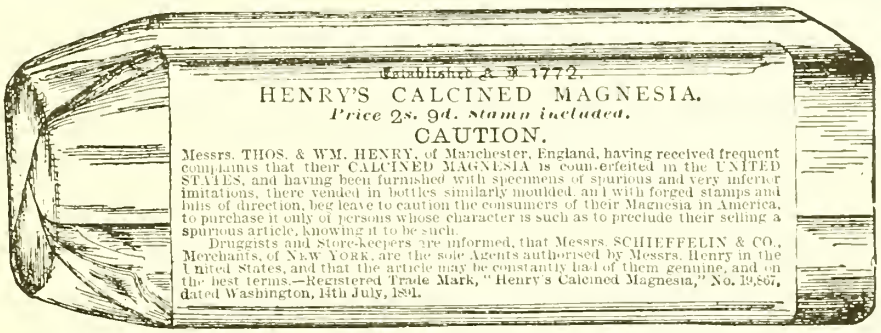
Messrs. THOMAS & WILLIAM HENRY, 11 East Street, St. Peter's, MANCHESTER.

To the American and Canadian Trade.

THE PROPRIETORS OF HENRY'S CALCINED MAGNESIA

desire to warn the Trade in Canada and the United States that gross imitations of their Magnesia are being produced in France and elsewhere, and are offered to foreign buyers. These articles closely resemble genuine HENRY'S MAGNESIA, in respect to Containers, Labels, Wrappers, and Government Stamp, and deceive all but the most wary, until the so-called Magnesia is tried. The imitations are most inferior.

The sale of these articles in England is a felony punishable by penal servitude for a term not exceeding fourteen years. The very serious nature of the offence deters the unscrupulous packers of the forged articles from offering them in England, and the Proprietors would point out to the Trade in Canada and the United States that they have a simple means of judging the genuineness of HENRY'S MAGNESIA, on examination of the true labels, which are here reproduced in facsimile.



Merchants who suspect they have false goods are invited to communicate with

THOS. & WILLIAM HENRY, MANCHESTER,

Or their Sole Agents for the United States,

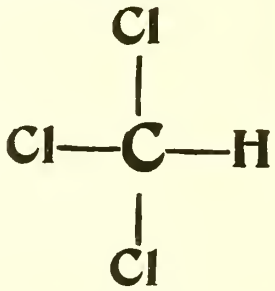
MESSRS. SCHIEFFELIN & CO., 170-172 William Street, **NEW YORK,**

Who are authorised to take legal proceedings against all Infringements brought to their attention.

British Products.

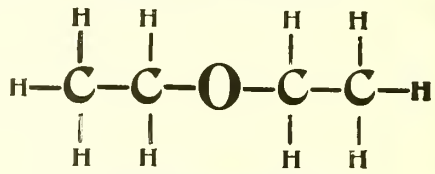
DUNCAN'S ANÆSTHETICS.

Duncan's Chloroform is



With { *A small percentage of Ethylic Alcohol added as a preservative.*

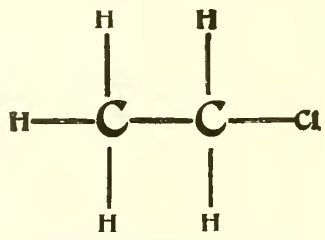
Duncan's Ether . is for Anæsthesia



Pure Di-Ethyl Oxide.

Sp. Gr. ·720.

Duncan's Chloryl Anæsthetic is



Absolute Ethyl Chloride.

These Graphic Formulas are graphic representations of the Absolute Purity of these Anæsthetics as manufactured only by—

Duncan, Flockhart & Co.

LABORATORIES, HEAD OFFICES AND WAREHOUSE:

104, 106 & 108 SOUTH CANONGATE, EDINBURGH.

Telephone { 3274 / Central. } 3 wires. Telegrams "Dunhart Edinburgh.

BRANCH OFFICE AND WAREHOUSE—

143 FARRINGDON ROAD, LONDON, E.C.

Telephone { 1260 / City. } 3 wires. Telegrams "Dunhart London."

GUARANTEED GENUINE . . .

British Products.

Boraldehyde

(Reg.).

A powerful Antiseptic Aromatic Gargle or Mouth Wash. Invaluable for the treatment of Septic or Ulcerated Throats. Rapidly cleanses the Mucus surfaces, and, being powerfully demulcent, acts as a sedative.

DUNCAN

Epicolloid.

A fluid protective highly elastic Plaster which rapidly evaporates, leaving a firm but pliant adhesive skin. Invaluable for covering skin areas and for uniting fissures and cracks which so frequently occur during the cold weather. Can be had medicated with **Ichthyol, Chrysophanic Acid, Menthol, Salicylic Acid, Zinc Oxide, &c.**

DUNCAN

DUNCAN'S

Physiological Standards.

In view of the recently often demonstrated facts that the Chemico-Pharmaceutical Assay and subsequent Standardisation of certain of the most valuable and most frequently prescribed Drugs is no guide or even indication of their Therapeutic value:

D. F. & Co. have these Preparations most carefully tested **Physiologically** and each package labelled with the maximum and minimum dose, as arrived at by physiological data, as well as the **Pharmacopœial doses,** which are based upon the quantity of crude material involved in the production of the finished article—an obviously unsatisfactory and unscientific basis.

Among the Preparations in Daily Use are:—

DIGITALIS,
SQUILLS,
STROPHANTHUS,
ERGOT,
&c.
&c.

} DUNCAN

Duncan's Silk Covered Glass Capsules for Administering Inhalations,

such as

Amyl Nitrite,
Chloroform, Ether,
Ethyl Bromide,
Ethyl Iodide, etc.

An entirely **new Design** of Glass Capsule, **Silk Covered,** which is most easily crushed by digital pressure, and does not require any mechanical assistance, like the old cylindrical-shaped Capsule. Packed in stout artistic boxes holding one dozen each.

Vaso-Constrictine

(Reg.).

The Isolated and purified **Physiologically Active Principle** of the **Suprarenal Gland.** The most powerful Hæmostatic known. Can be had in various galenical forms, such as Solution 1·1000; also in combination with Local Anæsthetics, **Suppositories, Ointments,** &c., and in minute **Compressed Tablets** for the rapid preparation of the Solution, for Clinical and other purposes.

DUNCAN

D.F.&Co.

EDINBURGH
AND
LONDON.

DUNCAN

Boroformide Tablets.

Boroformide Tablets are a most efficient and practical form of administering Formaldehyde and Boric Acid, for cases of Oral Sepsis, &c., &c. They are slowly but entirely soluble in the mouth and the whole of the Medicaments are therefore enabled to have the full effect locally.

INVALUABLE FOR JUVENILES.

MANUFACTURED BY

Duncan, Flockhart & Co.

HEAD OFFICES & LABORATORIES:

EDINBURGH,
AND LONDON,
143 Farringdon Road.

From whom Samples can be obtained

Wilkinson & Simpson

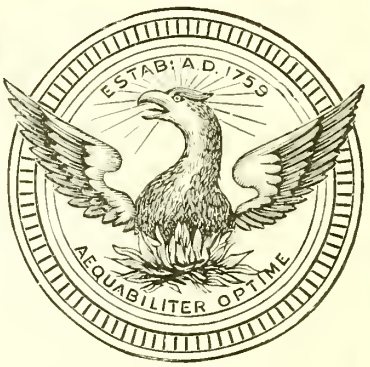
LIMITED

Manufacturing Chemists & Drug Millers,

NEWCASTLE-ON-TYNE.

Offices, Showrooms, Warehouses, and Pharmaceutical Laboratories } 24-32 NEWCATE ST.

Drug Mills and Packed Specialities Departments } DISPENSARY LANE, LOW FRIAR ST.



MANUFACTURERS of

High-class Galenicals and Pharmaceutical Preparations. Standardised Pharmacopœial Tinctures and Extracts. Genuine Powders and Spices (ground in our own mills).

IMPORTERS of

Crude Drugs, Olive, Castor, Seed and Essential Oils.

DEALERS in

Proprietary Articles and Patent Medicines, Druggists' Sundries, Photographic Apparatus & Requisites.

PROPRIETORS and ORIGINATORS of

THE NATURAL HEALTH SALT.

The first known. *Still first in popularity.*

PRICES In 4 oz. and 8 oz. Tins. PROTECTED.

LIVING PROFIT GUARANTEED.
BEST IN 1787—BEST NOW.
A TEST OF RELIABILITY.

45%

By selling 1 doz. 2/9, 13 to a doz.

The 2/9 Box contains three Boxes of the 13½d. Pills.

It will Pay to Push the Sale of the 2/9 Box.

KEARSLEY'S

(Over 100 Years' Reputation)

WIDOW WELCH'S

ORIGINAL **FEMALE PILLS.**

P.A.T.A. PRICES TO THE TRADE. 13½d., 9/6 per doz. 2/9 size, 23/- per doz., 13 to doz. Minimum Re-selling Prices, 13½d.—1/-, 2/9—2/6.

The Retailer knows that Kearsley's are "The Genuine," and we trust the trade will explain this to all customers who ask for cheaper imitations.

VERY SPECIAL REDUCED TERMS to Shippers for Bottles for Export 13 to doz., 2/9 size, and for 3 Gross of Boxes.

Unless so packed we cannot be responsible.

N.B.—These Pills do not contain any deleterious or prohibitive drugs, and can be sold with **safety** in the **Colonies** at good profits.

C. & G. KEARSLEY, Depot: 42 WATERLOO RD., —LONDON, S.E.—

(Late of 17 North Street, Westminster.)

THE SERUM TREATMENT
OF
HAY FEVER

Autumnal Catarrh, Rose Fever, and Similar Complaints.

POLLANTIN

(Specific Antidote for Pollen Toxine).

Patented in Germany, England, the United States, &c.

Prepared under supervision of the Discoverer,

Prof. DR. DUNBAR,

BY

SCHIMMEL & CO.

MILTITZ, near LEIPZIG

(GERMANY).

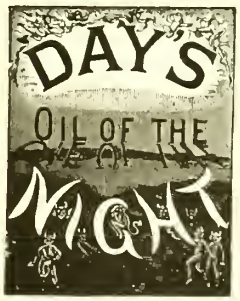
Sole Agents for the U.K. and the British Colonies (Canada and Australasia excepted):

Willows, Francis, Butler & Thompson, Ltd.,

Wholesale Druggists,

40 Aldersgate Street, LONDON, E.C.

DAY'S OIL OF THE NIGHT



The great household Remedy for Chest Colds, Sore Throat, Rheumatism, Sciatica, & all aches & pains.

"A positive pain killer."—DR. GORDON STABLES, R.N.

Advertised Prices ... 1 1½ and 2 9 per bottle.
Trade Prices ... 10/- and 25/- per dozen.
CARRIAGE PAID.

Proprietors:—**DAY & SONS, CREWE, LTD., CREWE.**

THE AMERICAN SEASON, 1909.

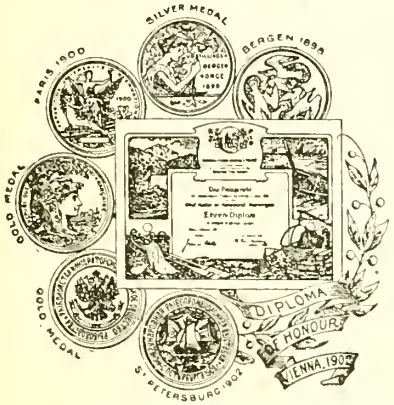
When requiring American Preparations, send direct to the Importers

THE AMERICAN DRUG STORES,

C. Brooks, M.P.S., 4 Northumberland Avenue, London, W.C. 'Phone: 10960 Central.

Murine Eye Remedies.——Milkweed Cream.
Sanitol.——Hudnut's Preparations.

Amolin, Squibb's Talcum, Sal Hepatica, Herpicide, Dr. Charles' Flesh Food, etc., etc.

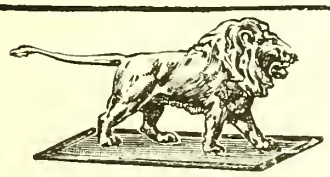


COD LIVER OIL

Holm's O.H. Gold Medal Brand
of Non-Freezing Norwegian Cod Liver Oil.

Wholesale Agents for United Kingdom:
A. ALBRETHSON & CO., Telegrams: "Albrethson, Glasgow."
41 ANN STREET, GLASGOW.

London Agents:
WILSON & MANSFIELD, Telegrams: "Wyfield, London."
19 ST. DUNSTAN'S HILL, LONDON, E.C.



TRADE MARK.

THE LION OF THE DAY.

BURGESS' LION OINTMENT

Others may come and others may go,
But Lion Ointment stays for ever.

For over thirty years this preparation has steadily progressed in public favour wherever the use of an Ointment is indicated, its sale is world wide, and the trade mark is protected by registration in all the Colonies, and other countries.

To Chemists it may be considered an addition to their Sundries trade, as nearly all users of same require lint, bandages, antiseptic fluid, or some accessory.

Kept in stock by all Wholesale Houses. Showcards, Counter Bills, &c., direct from the PROPRIETOR—

E. BURGESS, 59 Gray's Inn Road, London, W.C.

GRAND PRIX

Franco-British Exhibition, 1908,

LONDON.

T. & H. SMITH, LTD.

were awarded by the Jurors the

GRAND PRIX

(The Highest Award)

for the excellence of their exhibit, which comprised the following:—

MORPHINE AND ITS SALTS

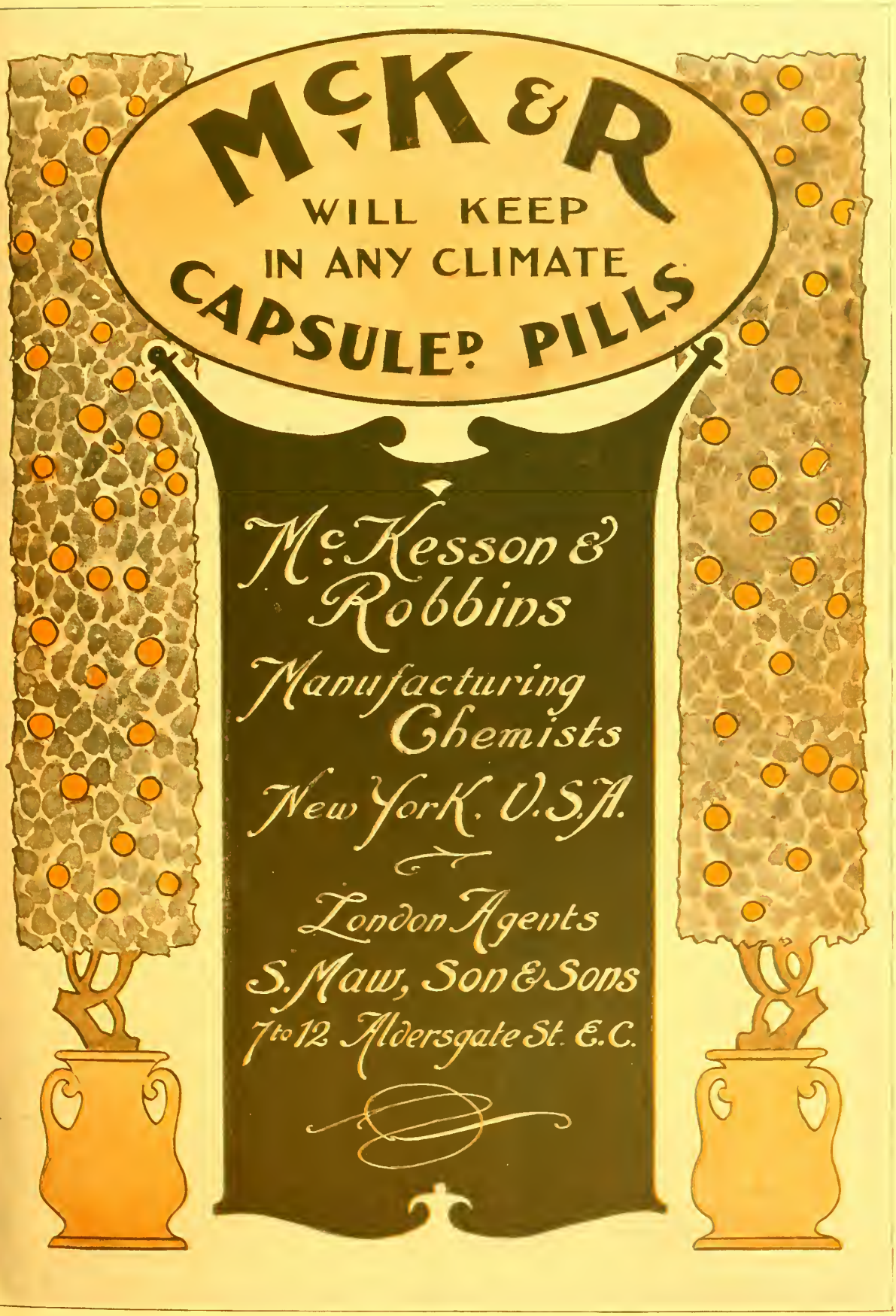
CODEINE & ITS SALTS
And all other Opium Alkaloids

CAFFEINE & ITS SALTS
CHLOROFORM
ALOIN
CANTHARIDIN

SALICIN
RESIN OF SCAMMONY
RESIN OF JALAP
CAPSICIN
GINGERIN
And their other well-known Products

Edinburgh, London, & Glasgow,

WHEATFIELD ROAD. 22 CITY ROAD, E.C. 37 WASHINGTON STREET.


McK&R
WILL KEEP
IN ANY CLIMATE
CAPSULEP PILLS
McKesson &
Robbins
Manufacturing
Chemists
New York, U.S.A.
London Agents
S. Maw, Son & Sons
7 to 12 Aldersgate St. E.C.

IMPORTANT REDUCTIONS HAVE BEEN MADE IN LIST PRICES.

"McK. & R." Capsuled Pills.

According to Formulas of the British Pharmacopœia and other Standard Authorities.

ACONITINE CRYSTALS, 1-500 gr.

Dr. A. Dumas considers aconitine an energetic and very efficacious remedy, especially in congestive facial neuralgia. He lays great stress on the necessity for a reliable preparation, and we, therefore, call particular attention to these pills.

ALOES, DILUTE (Dr. Hall Dinner Pill), 4 grs.

Aloes Barb.,	Pulv. Ext. Glycyrrh.,		
Saponis pulv.,	Theriaca, aa, 1 gr.		

ALOES AND IRON, B. P., 5 grs.

ALOES AND MYRRH, B. P., 3 and 5 grs.

ALOIN, 1-10, 1-4, 1-2 and 1 gr.

In an article on the management of Simple Constipation, the late Sir Andrew Clark said: "If the use of drugs is unavoidable, try the aloin pill. Take one half an hour before the last meal of the day, or just so much of one as will suffice to move the bowels in a natural way the next morning before breakfast. If it should produce a very copious motion, or several small motions, the pill is not acting right; only a fourth, or even less, should be taken for a dose. When the right dose has been found it may be taken daily or on alternate days until the habit of defecation is established." Dr. Clark used aloin in combination with nux vomica, iron, myrrh, etc. (See Aloin or Aperient, No. 4.)

ALOIN COMPOUND.

Aloin,	1-8 gr.
Ext. Belladonnæ,	1-4 gr.
Podophyllin,	1-8 gr.

ALOIN, HYOSCYAMUS, NUX VOM. AND IPECAC.
(Pil Salutis, Dr. Thomas.)

Aloin,	1-2 gr.
Ext. Hyoscy.,	1-2 gr.
Ext. Nucis Vom.,	1-4 gr.
Pulv. Ipecac.,	1-6 gr.

A gentle laxative and an aid to digestion; one at bedtime and repeat just after breakfast if necessary.

ALOIN AND STRYCHNINE.

Aloin,	1-5 gr.
Strychnina,	1-60 gr.

A tonic laxative granule, prescribed for chronic constipation where a painless peristaltic action is desired. Especially useful in the treatment of the aged.

ALOIN, STRYCHNINE AND BELLADONNA.

Aloin,	1-5 gr.
Strychnina,	1-60 gr.
Ext. Belladonnæ,	1-8 gr.

A tonic laxative granule, prescribed where a painless peristaltic action is required

ALOIN, STRYCH. AND BELLADONNA COMP.

Aloin,	1-5 gr.
Strychnina,	1-60 gr.
Ext. Belladonnæ,	1-8 gr.
Ext. Rhamni Purshianæ,	1-2 gr.

A laxative in habitual constipation. Dose, 1 pill, repeated three times a day if necessary.

ALOIN, STRYCH., BELLADONNA AND IPECAC.

Aloin,	1-4 gr.
Strychnina,	1-60 gr.
Ext. Bellad.,	1-8 gr.
Pulv. Ipecac.,	1-16 gr.

A prompt and efficient tonic laxative; does not gripe.

ALOIN OR APERIENT, No. 1.

Aloin,	Ext. Nucis Vom.,		
Ferri Sulph.,	Saponis pulv.,		
Myrrhæ pulv.,	aa, 1-2 gr.		

This formula was recommended by the late Sir Andrew Clark in the treatment of simple constipation.

ALOIN OR APERIENT, No. 2.

Aloin,	Ext. Nucis Vom.,		
Ferri Sulph.,	Saponis pulv.,		
Myrrhæ pulv.,	aa, 1-8 gr.		

This pill is one-quarter the strength of the one mentioned above, but is of the same formula and is recommended by the same authority. It is to be given in cases where "No. 1 is too strong."

ALOIN OR APERIENT, No. 3.

Aloin,	
Ext. Nucis Vom.,	
Ferri Sulph.,	
Ipecac. pulv.,	
Myrrhæ pulv.,	
Saponis pulv.,	aa, 1-8 gr.

This pill, the third one of the series, will be found of value where No. 2 (above) is indicated, *provided there is no special weakness of the heart.*

ALOIN OR APERIENT, No. 4.

Aloin,	
Ext. Nucis Vom.,	
Ext. Belladonnæ,	
Ferri Sulph.,	
Myrrhæ pulv.,	
Saponis pulv.,	aa, 1-8 gr.

In cases in which the above formulas appear to act in a more or less irregular manner, and belladonna appears to be indicated, this pill will be found of service.

The above four formulas, which have been graduated to form, as near as possible, a "natural" aperient, were recommended by the late Sir Andrew Clark.

ANTI-DYSPEPSIA (FOTHERGILL).

Strychnina,	1-20 gr.
Pulv. Ipecac.,	2-3 gr.
Pulv. Piper. Nig.,	1 1-2 grs.
Ext. Gentianæ,	1 gr.

Recommended by the late Dr. Fothergill in his article on "Atonic Dyspepsia."

ANTI-MALARIAL (See **QUININE COMPOUND**).

APHRODISIAC (See **DAMIANA AND PHOSPHORUS COMPOUND**).

ARSENIOUS ACID, 1-100, 1-50, 1-30 and 1-20 gr.

ASAFETIDA COMP., B. P., 5 grs

ATROPINE, 1-200 and 1-100 gr.

BLENNOSTASINE, 1, 2, 3 and 5 grs.

An invaluable remedy in influenza and common colds. In hay fever it acts almost as a specific.

BLUE MASS, B P., 1, 2, 3 and 5 grs.

BLUE MASS, COLOCYNTH AND HYOSCYAMUS.

Massa Hydrarg.,	1 gr.
Ext. Hyoscy.,	1 gr.
Ext. Colocynth. Co.,	3 grs.

CALCIUM SULPHIDE, 1-10, 1-4, 1-2 and 1 gr.

Recommended by Dr. Ringer in 1874

CALOMEL, 1-20, 1-10, 1-4, 1-2, 1, 2, 3 and 5 grs.

CALOMEL, COLOCYNTH AND HYOSCYAMUS.

Hyd. Subchlor.,	1 gr.
Ext. Coloc. Co.,	3 grs.
Ext. Hyoscy.,	1 gr.

CALOMEL COMP., B. P. (Plummer), 5 grs.

CALOMEL AND OPIUM.

Hyd. Subchlor.,	2 grs.
Opii pulv.,	1 gr.

CAMPHOR, MONO-BROMATED, 2 and 5 grs.

CANNABIS INDICA EXTRACT, 1-4 and 1-2 gr.

This extract has been esteemed as one of the most valuable medicines in the Materia Medica, but its usefulness has been greatly limited by the varying and uncertain character of the extracts furnished by manufacturers. Our extract is made in porcelain vessels, from the best selected flowering tops, and we have each lot tested therapeutically, before sending it out, so that the Profession can depend upon its action with almost as great a certainty as they can on that of Morphine.

CASCARA SAGRADA EXTRACT, 2 and 3 grs.

This extract is prepared in our own laboratory, and can be relied upon. Useful in habitual constipation, dyspepsia, jaundice, and similar affections of the digestive organs.

CATHARTIC COMPOUND, U. S. P. (Purgative).

Ext. Jalapæ pulv.,	
Hyd. subchlor.,	aa. 1 gr.
Ext. Coloc. Co. pulv.,	1 1-3 grs.
Cambogiæ pulv.,	1-4 gr.

One pill will act as a laxative, and two as a cathartic. Particularly applicable to the early stages of bilious fevers, to hepatitis, jaundice and all those derangements of the alimentary canal, or of the general health, which depend on congestion of the portal circle.

CODEINE, 1-8, 1-4, 1-2 and 1 gr.

COLOCYNTH COMP., B. P., 4 and 5 grs.

COLOCYNTH COMP. AND BLUE MASS, 5 grs.

Pil. Coloc. Comp., B. P.,	3 grs.
Massa Hydrarg.,	2 grs.

COLOCYNTH COMP. AND CALOMEL, 5 grs.

Ext. Coloc. Co.,	4 grs.
Hyd. Subchlor.,	1 gr.

COLOCYNTH AND HYOSCYAMUS, B. P., 5 grs.

CORROSIVE SUBLIMATE, 1-30, 1-20 and 1-10 gr.

DAMIANA AND PHOSPH. COMP. (APHRODISIAC)

Ext. Turneræ Aphro.,	2 grs.
Ext. Nucis Vomicæ,	1-3 gr.
Phosphorus,	1-100 gr.

Useful in sexual debility. Dose, 1 or 2.

DIGITALIN, 1-60 gr.

DINNER (Lady Webster).

Pulv. Aloes Soc.,	2 grs.
Pulv. Mastiches,	1-2 gr.
Pulv. Rosæ Gallicæ,	1-2 gr.

One or two pills taken shortly before a meal will usually produce one free evacuation.

ECLECTIC OR PODOPHYLLIN.

Res. Podophylli,	1-8 gr.
Res. Leptand.,	
Res. Juglandis,	aa, 1-16 gr.
Res Cimicif.,	1-32 gr.
Ol. Capsici.	—

THE READY SOLUBILITY of "McK. & R." Pills is easily proved by placing a quinine pill on the tongue and noticing the rapid dissolution of the gelatine.

Complete list of formulas on application.

In ordering be careful to specify "McK. & R."

NOTE CHANGES AND ADDITIONS TO THE LIST.

"McK. & R." Capsuled Pills.

According to Formulas of the British Pharmacopœia and other Standard Authorities.

EMMENAGOGUE.
Ergotin, 1 gr.
Ext. Helleb. Nig., 1 gr.
Ferri Sulph. Exsic., 1 gr.
Pulv. Aloes Soc., 1 gr.
Ol. Sabinæ, 1-4 gr.

EMMENAGOGUE (Mutter).
Ferri Sulph. Exsic., 1 1-2 grs.
Terebinthina, 1 1-2 grs.
Aloes Soc., 1-2 gr.

ERGOTIN, 2, 3 and 5 grs.
Each pill contains the active principles of 30 grains Ergot of Rye, or 30 minims of the liquid or fluid extract.

EUONYMIN, 2 and 3 grs.

EUONYMIN COMP.
Euonymin, 1 gr.
Aloin, 1-4 gr.
Ext. Rhei, 1 gr.
Ext. Nucis Vom., 1-8 gr.
Ext. Hyoscyami, 1 gr.

FERRUGINOUS (Blaud), 3 grs.

FERRUGINOUS (Blaud), 5 grs.
Ferri Sulphas,
Potassii Carb., aa, P. Æ.

GUAIAQUIN, 1, 2 and 3 grs.
(Guaiacol Quinine Bisulphonate.)

IODOFORM, 1 gr.

IRON ARSENATE, 1-B gr.

IRON CARBONATE, B. P., 5 grs.

IRON BY HYOROGEN, 1, 2 and 4 grs.

IRON IODIDE (Blancard), 1 gr

IRON AND QUININE CITRATE, 2 grs.

IRON, QUININE AND STRYCHNINE.
Ferrum Reductum,
Quininæ Sulph., aa, 1 gr.
Strychnina, 1-60 gr.

LAXATIVE, VEGETABLE (Improved Cathartic).
Res. Podoph.,
Ext. Hyoscy.,
Ext. Tarax., aa, 1-4 gr.
Ext. Coloc. Co., pulv., 1 gr.
Jalapæ pulv.,
Res. Leptand., aa, 1-2 gr.
Ol. Menth. Pip.,

MANGANESE BINOXIDE, 2 grs.

MERCURY BINIODIOE, 1-16 gr.

MERCURY PROTO-IODIDE, 1-20, 1-16, 1-8, 1-4 gr.
We now obtain this salt absolutely pure. The irritation of the stomach so frequently caused by the ordinary salt is no doubt due to impurity, such as red iodide, and is not observed in the use of our proto-iodide.

MERCURY WITH CHALK, No. 1 (Hutchinson).
Hydrarg. cum creta, 1 gr.
Confect. Rosæ, q. s.

MERCURY WITH CHALK, No. 2 (Hutchinson).
Hydrarg. cum creta, 1 gr.
Doveri pulv. 1 gr.
Ext. Gentianæ, q. s.

MERCURY WITH CHALK, No. 3 (Hutchinson).
Hydrarg. cum creta, 1 gr.
Ext. Nucis Vom., 1-4 gr.
Ferrum Reductum, 2 grs.
Ext. Gentianæ, q. s.
This preparation of mercury is the one preferred by Dr. Jonathan Hutchinson.

MORPHINE MURIATE, 1-B and 1-4 gr.

NITRO-GLYCERIN, 1-100 and 1-50 gr.

OPIUM AND CAMPHOR.
Opii, 1 gr. Camphoræ, 2 grs.
Dose, 1 pill.

OPIUM, POWD., 1 gr.

PEPSIN, PURE, CONCENTRATEO, 1 gr.
Each pill equal in digestive properties to 5 grs. Saccharated Pepsin.

PHOSPHORUS, 1-100, 1-50 and 1-30 gr.
Contain the full amount of Phosphorus in unoxidized form.

PHOSPHORUS AND IRON.
Phosphor. Pur., 1-50 gr.
Ferrum Reduct., 2 grs.

PHOSPHORUS, IRON AND QUININE.
Phosphor. Pur., 1-100 gr.
Ferri Carb. (Vallet), 1 gr.
Quininæ Sulph., 1 gr.

PHOSPHORUS AND NUX VOMICA.
Phosphor. Pur., 1-50 gr.
Ext. Nucis Vom., 1-4 gr.

PHOSPHORUS, NUX VOMICA AND IRON.
Phosphor. Pur., 1-50 gr.
Ext. Nucis Vom., 1-4 gr.
Ferri Carb., 1 gr.

PHOSPHORUS AND QUININE.
Phosphor. Pur., 1-50 gr.
Quininæ Sulph., 1 gr.

PHOSPHORUS, QUININE, IRON AND STRYCH.
Phosphorus, 1-50 gr.
Ferrum Reduct., 2 grs.
Quininæ Sulphas, 1-2 gr.
Strychnina, 1-60 gr.

PHOSPHORUS AND VALER. ZINC.
Phosphor. Pur., 1-50 gr.
Zinci Valer., 1 gr.

POOPHYLLIN, 1-B, 1-4 and 1-2 gr.

PODOPHYLLIN COMP.
Res. Podoph., 1-2 gr.
Ext. Coloc. Co., 2 grs.
Ext. Hyoscy., 1 gr.

PODOPHYLLIN COMP. (Dr. Janeway).
Res. Podophylli, 1-2 gr.
Aloe Soc., 1 gr.
Ext. Bellad.,
Ext. Nucis Vomicæ, aa, 1-4 gr.
Dose, 1 or 2 pills.

QUININE BROMIOE (Hydrobromate), **1, 2, 3 grs.**
Unites the alterative effects of bromine with the tonic properties of quinine. Dose, 1 to 3 grs.

QUININE MURIATE, 1, 2 and 3 grs.

QUININE AND CAPSICUM.
Quininæ Sulph., 2 grs.
Pulv. Capsici, 1-2 gr.
Capsicum is said to assist the action of Quinine. Dose, 1 to 3 pills.

QUININE BI-SULPHATE, 1-4, 1-2, 1, 2, 3, 4, 5 grs.
Bi-Sulphate of Quinine is much more soluble than the sulphate, the latter requiring seven hundred parts of water to dissolve it, while the BI-SULPHATE DISSOLVES IN TEN PARTS.

QUININE COMP. (Anti-Malarial).
Quininæ Sulph.,
Cinchonid. Sulph., aa, 1 gr.
Acid. Arsenios., 1-40 gr.
Acid. Carbolic.,
Menthol, aa, 1-8 gr.
Capsici pulv., 1-4 gr.
This pill is largely prescribed in the most severe malarial districts of America, with remarkable results.

QUININE SULPHATE, 1-4, 1-2, 1, 2, 3, 4, 5 grs.

QUININE AND STRYCHNINE.
Quininæ Sulphas, 1 gr.
Strychnina, 1-60 gr.
Dose, 1 or 2 pills.

QUININE VALERIANATES, 1-2, 1, 2 and 3 grs.
In debility, attended with nervous disorder, 1 or 2 pills may be given, two or three times a day.

RHUBARB COMP., B. P., 5 grs.

RHUBARB COMP. AND BLUE MASS, 5 grs.
Pil. Rhei Comp., 3 grs.
Pil. Hydrarg., 2 grs.

SALICYLIC ACID, 2 and 5 grs.

STROPHANTHUS AND IRON.
Pulv. Sem. Strophanthi, 1-4 gr.
Ferri Sulph., 1 1-2 grs.
Potassii Carb., 1 1-2 grs.
This pill represents Blaud's formula in combination with strophanthus, and may be given where a ferruginous heart tonic is indicated. Dose, 1 or 2 pills.

STRYCHNINE, 1-200, 1-100, 1-60, 1-50, 1-40, 1-30 and 1-20 gr.
Dose, according to case, from 1-200 to 1-20 gr.

STRYCHNINE SULPHATE, 1-200, 1-100, 1-60, 1-50, 1-40 and 1-30 gr.
Dose, 1-200 to 1-30 grain at bed time.

THYMOL (Thymic Acid), **2 1-2 grs.**
Used in cases of typhoid fever, pneumonia and pleurisy, and also as a tænifuge. Dose, two 2 1-2 gr. pills every six hours.

TONIC (Dr. Aiken).
Quininæ Sulph., 1 gr.
Acid. Arseniosum, 1-50 gr.
Ferrum Reductum, 2-3 gr.
Strychnina, 1-50 gr.
A valuable general tonic. Dose, 1 pill three times a day.

TONIC-LAXATIVE (Fothergill).
Quininæ Sulph., 2-3 gr.
Strychnina, 1-30 gr.
Ferrum Reduct.,
Ext. Bellad., aa, 1-4 gr.

TRIPLEX.
Ext. Aloes, 2 grs.
Res. Podophylli, 1-4 gr.
Massa Hydrarg., 1 gr.
Valuable where a cathartic is required with a peculiar action on the liver. Dose, 1 to 3 pills.

VALERIANATES QUININE, IRON AND STRYCH.
Quin. Val., 1 gr.
Strych. Val., 1-60 gr.
Ferri Val., 1 gr.
Useful in nervous debility. Dose, 1 pill three times a day.

WARBURG TINCTURE.
Each pill represents 1 fluid drachm of the tincture.

WARBURG TINCTURE WITHOUT ALOES.
Each pill represents 1 fluid drachm of the tincture.

WARBURG TINCTURE WITHOUT ALOES.
Each pill represents 2 fluid drachms of the tincture

ZINC PHOSPHIOE AND EXT. NUX VOMICA.
Zinci Phosphidum, 1-10 gr.
Ext. Nucis Vomicæ, 1-4 gr.
Tonic. Useful in palsy, neuralgia and chronic constipation, also in brain diseases. Dose, 1 to 3 pills.

ZINC VALERIANATE. 1 and 2 grs.

Special Combinations of 3,000 or more Pills made or Capsuled to order for Hospitals and large consumers at special quotations.

Address: McKESSON & ROBBINS, 91 Fulton Street, New York, U. S. A.

"McK. & R." Caps. Pills are prepared expressly for the use of Physicians and Surgeons and to be dispensed in Prescriptions.

In ordering be careful to specify "McK. & R."

CALOX

THE OXYGEN TOOTH POWDER

(Patented in Great Britain, France, Canada and the United States of America)

It does not depend for its effect upon oils, strong essences, carbolic acid or other irritant disinfectants, but upon the presence of nature's germicide

OXYGEN

Its efficiency is due to the Oxygen which it generates when used



JOSEPH PRIESTLEY discovered Oxygen in 1774. In one of the earliest reports of his experiments with the gas, he wrote "*who knows that in the future this gas may not become one of the luxuries of the age.*" Its use in tooth powder is not only a luxury but the most notable advance in mouth hygiene ever made.



Chemists will do themselves credit by recommending this scientific preparation and explaining its character. Calox is prescribed by dentists and physicians all over the world.

PRICE

9/6 per doz.

On the P. A. T. A. Plan

BRITISH DEPOT

A. C. Wootton

14 Trinity Square, Tower Hill, London, E. C.

CANADIAN DEPOT

National Drug & Chem. Co. of Canada, Ltd., Montreal

McKESSON & ROBBINS

Manufacturers

NEW YORK CITY, N. Y., U. S. A.

MAY, ROBERTS & CO., LTD.

7, 9 & 11, CLERKENWELL ROAD, LONDON, E.C.

AND

16, WESTMORELAND STREET, DUBLIN.

Telephones
941 Central London.
4487 „ „
1313 National Dublin.

Telegraphic Addresses: "FEEDERS, DUBLIN." "FEEDING BOTTLES, LONDON." Cable Address: "TOOTHBRUSH, LONDON."

SOLE AGENTS
FOR

E. B. ESTES & SONS,

NEW YORK,

MANUFACTURERS OF

Druggists' & Chemists' Turned Wooden Boxes.

FACTORIES IN

FARMINGTON. SALEM. PHILLIPS.
NEW VINEYARD. WAYNE. NEW PORTLAND. MAINE.
AND **ASHUELOT, N.H.**

The Most Extensive Manufacturers of Turned Wooden Boxes in the World.

ESTABLISHED 1847.

ANY KIND, SIZE, OR SHAPE OF TURNED WOODEN BOX MADE TO ORDER FOR ANY PURPOSE.

INQUIRIES SOLICITED.

TERMS.

33⅓% discount on Original Cases and 10% on Smaller quantities.

N.B.—E. B. Estes & Sons do not supply Assorted Cases of their Goods

Special Prices for continuous Contracts, and arrangements can be made for keeping Stock of Special Goods in London.

Satisfactory London References required on opening New Accounts.

ESTABLISHED 1847.

THE MOST EXTENSIVE MANUFACTURERS OF TURNED WOODEN BOXES IN THE WORLD.

MAY, ROBERTS & CO., Ltd.,

7, 9 & 11, CLERKENWELL ROAD, LONDON, E.C.

AND 16, WESTMORELAND STREET, DUBLIN.

SOLE AGENTS FOR GREAT BRITAIN AND IRELAND FOR

E. B. ESTES & SONS,

MANUFACTURERS OF

DRUGGISTS' TURNED WOODEN BOXES.

These Boxes are manufactured from thoroughly seasoned, selected White Birch Lumber; they are finely turned and smoothly finished outside and inside. There is no odour to this wood that will in any way affect the most delicate Powders. They are used by the largest Druggists and Confectioners in Europe, North and South America, Australia, Asia and Africa.

They are neater, stronger, more serviceable, more durable, and more attractive than Paper Boxes, and cost considerably less. They have an enormous sale wherever offered.









DRUG BOXES.

	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	
Contents of	1	2	3	4	5	6	7	8	9	10	11	11½	12	13	14	
Case ...	140	100	90	80	60	50	50	40	35	30	25	25	20	12	10	gross.
Diameter ...	1⅛	1 5/16	1⅜	1 7/16	1½	1½	1 11/16	1 13/16	1 13/16	2	2	2	2¼	2⅝	2¾	
Height ...	⅝	¾	¾	⅞	1	1 3/16	1 5/16	1 1/16	1⅛	1	1 3/16	1¼	1¼	1 1/16	1 11/16	
Price ...	1/5	1/6	1/10	2/1	2/3	2/9	2/9	3/1	3/3	4/-	4/5	5/-	6/8	10/5	13/4	

CHEMISTS' PILL BOXES.

	×	×	×	×	×	×	×	×	×
	0	1	2	3	4	5	6	7	8
Contents of Case...	100	70	60	50	35	25	20	15	10 gross.
Diameter	5/8	15/16	1	1	1⅛	1⅜	1½	1 7/16	1 11/16
Height	2	2 1/16	2⅛	2½	2 9/16	2⅝	3	3½	3⅝
Price	1/6	2/4	2/7	2/9	3/9	5/2	7/1	7/6	10/-

NOTE. Stock is kept in London of the sizes marked X **Dimensions quoted are Outside Measurements.**

ESTABLISHED 1847.

The MOST EXTENSIVE MANUFACTURERS of TURNED WOODEN BOXES in the WORLD.

E. B. ESTES & SONS,

(BOX MANUFACTURERS TO THE WORLD),

MANUFACTURERS OF

DRUGGISTS' TURNED WOODEN BOXES.

These boxes are manufactured from thoroughly seasoned, selected White Birch Lumber; they are evenly turned and smoothly finished outside and inside. There is no odour to this wood, hence the boxes cannot effect the most delicate Powders. These boxes are used by the largest Druggists, Chemists and Confectioners in Europe, North and South America, Australia, Asia and Africa. For Powders, Face and Tooth Powders, Pills, and all kinds of Druggists Prescriptions, and Proprietary Articles.

These Boxes are absolutely free from dampness and particularly adapted to moist climates.

They are neater, stronger, more serviceable, more durable and more attractive than Paper Boxes, and cost considerably less. They have an enormous sale wherever offered.















THE CUTS ON THIS PAGE REPRESENT THE FULL SIZE OF EACH BOX UP TO 4 OZ.

ESTES' DRUGGISTS' TURNED WOODEN BOXES.

Sizes.	Gross in each Case.	Price per Gross.	Sizes.	Gross in each Case.	Price per Gross.	Sizes.	Gross in each Case.	Price per Grosss	Sizes.	Gross in each Case.	Price per Gross.
1 dram	90	... 1/3	3 dram	60	... 1/11	× 1 oz.	30	... 3/4	× 3 oz.	15	... 6/8
1½ ,,	80	... 1/4	× ½ oz.	50	... 2/2	× 1½ ,,	25	... 4/2	× 4 ,,	10	... 10/-
× 2 ,,	70	... 1/6	¾ ,,	40	... 2/9	× 2 ,,	20	... 5/0			

SOLE AGENTS FOR GREAT BRITAIN AND IRELAND

MAY, ROBERTS & CO., Ltd.,

7, 9 & 11, Clerkenwell Road, London, E.C. & 16, Westmoreland Street, Dublin.

STOCK IS KEPT IN LONDON OF THE SIZES MARKED X

A NEW, BEAUTIFUL, USEFUL, FINELY FINISHED DRUGGISTS' TURNED WOODEN BOX.

ECONOMICAL. DURABLE. ELEGANT.

ESTES'

PATENT TURNED WOODEN BOXES.

These Boxes are entirely new. They are artistically designed, truly and smoothly turned from selected White Birch, and neatly and finely finished. They are the most attractive, elegant, and useful Turned Wooden Boxes ever made, and are adapted to all the uses of the finest grades of paper and glass boxes, while the prices are fifty per cent. less.

Send a sample order and you will repeat it many times.



Size.	Gross in each Case.	Per Gross.
¼ dram	125	1/5
½ ,,	120	1/6
1 ,,	90	1/7

Size.	Gross in each Case.	Per Gross.
1½ dram	80	1/8
× 2 ,,	70	1/11
3 ,,	60	2/2

Size.	Gross in each Case.	Per Gross.
× ½ oz.	50	2/7
¾ ,,	40	3/1
× 1 ,,	30	4/2
× 1½ ,,	25	4/5

Size.	Gross in each Case.	Per Gross.
× 2 oz.	20	7/11
2½ ,,	18	8/4
× 3 ,,	15	8/9

Size.	Gross in each Case.	Per Gross.
× 4 oz.	10	11/8
6 ,,	6	18/4
8 ,,	4	20/10

SOLE AGENT FOR GREAT BRITAIN AND IRELAND

MAY, ROBERTS & CO., Ltd.,

7, 9 & 11, Clerkenwell Road, London, E.C. & 16, Westmoreland Street, Dublin

NOTE.—Illustrations are Exact Size of Goods. Stock is kept in London of the sizes marked ×

A NEW, BEAUTIFUL, USEFUL, FINELY FINISHED DRUGGISTS' TURNED WOODEN BOX.

ECONOMICAL. DURABLE. ELEGANT.

ESTES'
ALMADA TURNED WOODEN BOXES.

These Boxes are entirely new. They are artistically designed, truly and smoothly turned from selected White Birch, and neatly and finely finished. They are most attractive, elegant, and useful Turned Wooden Boxes, and are adapted to all the uses of the finest grades of paper and glass boxes while they cost fifty per cent. less.

Send a sample order and you will repeat it many times.















Size.	Gross in each Case.	Per Gross.	Size.	Gross in each Case.	Per Gross.	Size.	Gross in each Case.	Per Gross.	Size.	Gross in each Case.	Per Gross.
1 dram	90 ...	1/7	× 3 dram	60 ...	3/1	× 1 oz.	... 30 ...	4/2	2½ oz.	... 18 ...	8/4
× 1½ ,,	80 ...	2/5	× ½ oz.	50 ...	3/6	× 1½ ,,	... 25 ...	6/3	× 3 ,,	... 15 ...	11/8
× 2 ,,	70 ...	2/7	× ¾ ,,	40 ...	3/9	× 2 ,,	... 20 ...	7/6	× 4 ,,	... 10 ...	13/4

SOLE AGENTS FOR GREAT BRITAIN AND IRELAND

MAY, ROBERTS & CO., Ltd.,

7, 9 & 11, Clerkenwell Road, London, E.C. & 16, Westmoreland Street, Dublin.

NOTE.—Illustrations are Exact Size of Goods. Stock is kept in London of the sizes marked X.

A NEW, BEAUTIFUL, USEFUL, FINELY FINISHED DRUGGISTS' TURNED WOODEN VIAL.

ECONOMICAL. DURABLE. ELEGANT.

ESTES' Patent Turned Wooden Vials.

Estes' Turned Wooden Vials are new and very attractive and are replacing glass for all purposes except for the use of liquids. We manufacture these Vials from the finest selected thoroughly seasoned White Birch Lumber. They are beautifully designed, truly turned and finely finished, and entirely free from odour or dampness. These goods are being adopted by the leading chemists, druggists, physicians, and proprietary houses in America and Europe.



CUTS REPRESENT EXACT SIZE OF EACH VIAL.

Size.	Gross in each Case.	Per Gross.
½ dram	300	1/5
1 ,,	200	1/7
½ ,,	175	1/10
1 ,,	125	2/1
1 × 2 dram	90	2/4
,, 3 ,,	70	2/9
× 4 ,,	65	3/4
5 ,,	55	4/2
× 6 dram	45	4/7
× 8 ,,	40	5/2
1½ oz.	30	5/6
2 ,,	25	6/6
2½ oz.	20	7/6
3 ,,	17	9/2
× 3½ ,,	15	10/1
4 ,,	12	12/5

SOLE AGENTS FOR GREAT BRITAIN AND IRELAND—

MAY, ROBERTS & CO., Ltd.,

7, 9 & 11, Clerkenwell Road, London, E.C. & 16, Westmoreland Street, Dublin.

Stock is kept in London of the sizes marked X.

A NEW, ELEGANT, USEFUL, FINELY FINISHED TURNED WOODEN BOTTLE.

ARTISTIC. DURABLE. ECONOMICAL.

ESTES' Patent Turned Wooden Bottles

Estes' Patent Turned Wooden Bottles are novel, useful and attractive, and they are replacing glass for all purposes except the use of liquids. These bottles are manufactured from the finest selected, thoroughly seasoned White Birch Lumber. They are artistically designed, truly turned and finely finished, and entirely free from odour and dampness. These goods are being used by the leading chemists, druggists, physicians and proprietary houses in this country.



CUTS REPRESENT EXACT SIZE OF EACH BOTTLE.

	No. 0	100	Gross in each Case			per Gross	1 10	× No. 4	40	Gross in each Case			per Gross	4/7
×	,, 1	70	,,		,,	,,	2/1	× ,, 5	20	,,		,,	,,	6/3
×	,, 2	60	,,		,,	,,	2/8	× ,, 6	10	,,		,,	,,	10 5
×	,, 3	50	,,		,,	,,	3/4	,, 7	8	,,		,,	,,	12/6

SOLE AGENTS FOR GREAT BRITAIN AND IRELAND

MAY, ROBERTS & CO., Ltd.,

7, 9 & 11, Clerkenwell Road, London, E.C. & 16, Westmoreland Street, Dublin.

Stock is kept in London of the sizes marked ×.

THE CHEAPEST BOXES OF ANY

Estes' Patent Chemists'

FOR PILLS, WAFERS, LOZENGES, TABLETS,

We manufacture ESTES' PATENT CHEMISTS' TURNED WOODEN BOXES from thoroughly
These Boxes are absolutely free from dampness and odour, and they will in no way affect
country in the world. Special Shapes and Sizes made to order. ESTES' PATENT CHEMISTS'
and the flush bead shows which is the



THE CUTS ON THESE PAGES ARE THE FULL SIZES

	Sizes.	Height.	Diameter.	Gross in Case.	Price per gross.
	No. 1P.	1¼ ins.	7/16 in.	200	1/4
	,, 2P.	1½ ,,	7/16 ,,	175	1/5
	,, 3P.	1¾ ,,	7/16 ,,	150	1/6
	,, 4P.	2 ,,	7/16 ,,	125	1/7
	,, 5P.	2¼ ,,	7/16 ,,	100	1/8
	,, 6P.	1½ ,,	½ ,,	175	1/8
	,, 7P.	1¾ ,,	½ ,,	150	1/9
×	,, 8P.	2 ,,	½ ,,	125	1/10
	,, 9P.	2¼ ,,	½ ,,	100	2/1
×	,, 10P.	2½ ,,	½ ,,	80	2/2
	,, 11P.	1¾ ,,	5/8 ,,	125	1/9
×	,, 12P.	2 ,,	5/8 ,,	100	1/10
×	,, 13P.	2¼ ,,	5/8 ,,	80	2/1
	,, 14P.	2½ ,,	5/8 ,,	65	2/4

	Sizes.	Height.	Diameter.	Gross in Case	Price per gross.
×	No. 15P.	2¾ ins.	⅝ in.	50	2/6
	,, 16P.	1¾ ,,	¾ ,,	75	2/1
	,, 17P.	2 ,,	¾ ,,	70	2/3
	,, 18P.	2¼ ,,	¾ ,,	60	2/4
	,, 19P.	2½ ,,	¾ ,,	50	2/5
	,, 20P.	2¾ ,,	¾ ,,	40	2/7
	,, 21P.	3 ,,	¾ ,,	30	2/8
	,, 22P.	1¾ ,,	⅞ ,,	80	2/5
×	,, 23P.	2 ,,	⅞ ,,	70	2/5
	,, 24P.	2¼ ,,	⅞ ,,	60	2/6
	,, 25P.	2½ ,,	⅞ ,,	50	2/9
	,, 26P.	2¾ ,,	⅞ ,,	40	3/1
	,, 27P.	3 ,,	⅞ ,,	30	3/3
	,, 28P.	2 ,,	15/16 ,,	70	2/5

Stock is kept of Items marked X.

DESCRIPTION MADE IN THE WORLD.

Turned Wooden Boxes

POWDERS, LIQUIDS, DRUGS AND CHEMICALS.

seasoned selected White Birch Lumber, which we scientifically prepare for this purpose the goods. They are particularly adapted to moist climates, and to-day are in use in every BOX is a great improvement on the old style Box. The round edges add to the appearance. top of Box and where to break label.



OF THE TURNED WOODEN BOXES WHICH THEY REPRESENT.

	Sizes.	Height.	Diameter.	Gross in Case.	Price per gross.
×	No. 29P.	$2\frac{1}{8}$ ins.	1 in.	60	2/6
×	„ 30P.	$2\frac{1}{4}$ „	1 „	55	2/9
×	„ 31P.	$2\frac{3}{8}$ „	1 „	50	3/-
	„ 32P.	$2\frac{1}{2}$ „	1 „	45	3/1
	„ 33P.	$2\frac{3}{4}$ „	1 „	40	3/5
	„ 34P.	3 „	1 „	30	3/11
×	„ 35P.	$2\frac{1}{2}$ „	$1\frac{1}{8}$ „	35	3/6
×	„ 36P.	$2\frac{3}{4}$ „	$1\frac{1}{8}$ „	30	3/8
×	„ 37P.	3 „	$1\frac{1}{8}$ „	25	4/2
	„ 38P.	$3\frac{1}{4}$ „	$1\frac{1}{8}$ „	20	4/7
×	„ 39P.	$2\frac{3}{4}$ „	$1\frac{1}{4}$ „	25	5/1
	„ 40P.	3 „	$1\frac{1}{4}$ „	20	5/6
×	„ 41P.	$3\frac{1}{4}$ „	$1\frac{1}{4}$ „	15	6/-
×	„ 42P.	3 „	$1\frac{1}{2}$ „	20	6/9

	Sizes.	Height	Diameter.	Gross in Case.	Price per gross.
×	No. 43P.	$3\frac{1}{2}$ ins.	$1\frac{1}{2}$ ins.	15	7/10
×	„ 44P.	4 „	$1\frac{1}{2}$ „	10	6/2
×	„ 45P.	$3\frac{3}{4}$ „	$1\frac{1}{2}$ „	8	10/1
×	„ 46P.	$4\frac{1}{4}$ „	$1\frac{1}{2}$ „	8	12/6
×	„ 47P.	$4\frac{1}{2}$ „	$1\frac{1}{2}$ „	6	13/9
×	„ 48P.	$4\frac{1}{2}$ „	2 „	6	16/6
×	„ 49P.	5 „	2 „	5	18/4
×	„ 50P.	5 „	$2\frac{1}{4}$ „	5	22/11
×	„ 51P.	$5\frac{1}{2}$ „	$2\frac{1}{4}$ „	4	23/10
	„ 52P.	6 „	$2\frac{1}{4}$ „	4	29/10
	„ 53P.	6 „	$2\frac{3}{8}$ „	4	31/8
	„ 54P.	$6\frac{1}{2}$ „	$2\frac{3}{8}$ „	3	33/6
	„ 55P.	$6\frac{1}{2}$ „	$2\frac{1}{2}$ „	3	39/-

Stock is kept of Items marked X.

ESTABLISHED OVER HALF A CENTURY.

THE MOST EXTENSIVE MANUFACTURERS OF TURNED WOODEN BOXES IN THE WORLD

E. B. ESTES & SONS,

MANUFACTURERS OF

Estes' Patent Turned Wooden Bottles.

(WIDE MOUTH.)



Estes' Patent (Wide-Mouthed) Turned-Wooden Bottles are new and very attractive, and are replacing glass, tin and paper receptacles. We manufacture these Bottles from the finest selected, thoroughly seasoned white birch lumber. They are beautifully designed, truly turned and finely finished and entirely free from odor and dampness. These goods are being adopted by the leading chemists, druggists, and proprietary houses.

NET PRICES.

Size.	Gross in Case.	Per Gross.	Size.	Gross in Case.	Per Gross.	Size.	Gross in Case.	Per Gross.	Size	Gross in Case.	Per Gross.
1/8 oz.	100	2/5	× 1 oz.	35	5/2	3 oz.	15	11/6	10 oz.	7	25/8
1/4 ,,	75	2/9	1 1/2 ,,	30	6/0	4 ,,	12	12/6	12 ,,	5	32/1
× 1/2 ,,	50	3/6	× 2 ,,	25	7/6	6 ,,	10	17/-	16 ,,	2	41/3
× 3/4 ,,	40	3/8	2 1/2 ,,	20	10/1	8 ,,	8	22/11			

Special sizes made to order, and very low prices quoted on large quantities.

SOLE AGENTS FOR GREAT BRITAIN AND IRELAND—

MAY, ROBERTS & CO., Ltd.,

7, 9 & 11, Clerkenwell Road, London, E.C. & 16, Westmoreland Street, Dublin.

STOCK KEPT IN LONDON OF THE ITEMS MARKED X.

ESTABLISTED 1847, THE MOST EXTENSIVE MANUFACTURERS OF TURNED-WOODEN BOXES IN THE WORLD.

E. B. ESTES & SONS,

MANUFACTURERS OF

Estes' Patent Wooden Ointment-Jars

ENAMELED WHITE INSIDE. GREASE-PROOF.

These wooden Ointment-Jars are new, practical, and saleable goods. They are stronger, neater, more attractive, and more serviceable than glass jars, and cost 50% less. They are smoothly finished outside and coated with grease-proof—impervious—white enamel inside. Send a sample order and you will use these jars permanently.

Packed in pasteboard cartons of one-quarter, one-half, and one gross each.



NET PRICES:

Size.	Gross in Case.	Price per Gross.
⅛ oz. ointment-jar, 1 gross in carton.	28	5/-
¼ " " 1 "	20	7/6
×½ " " 1 "	16	10/-
×1 " " ½ "	12	12/6
×2 " " ¼ "	8	17/6
3 oz. ointment-jar, ¼ gross in carton.	5	22/6
4 " " ½ "	4	27/6
6 " " ¼ "	3	32/6
8 " " 1 "	2	42/6

SOLE AGENT FOR GREAT BRITAIN AND IRELAND—

MAY, ROBERTS & CO., Ltd.,

7, 9 & 11, Clerkenwell Road, London, E.C., & Westmoreland Street, Dublin.

STOCK KEPT IN LONDON OF THE ITEMS MARKED X.

— ESTABLISHED 1847. —

The MOST EXTENSIVE MANUFACTURERS of TURNED WOODEN BOXES in the World.

DURABLE. ECONOMICAL. SERVICEABLE.

E. B. ESTES & SONS'

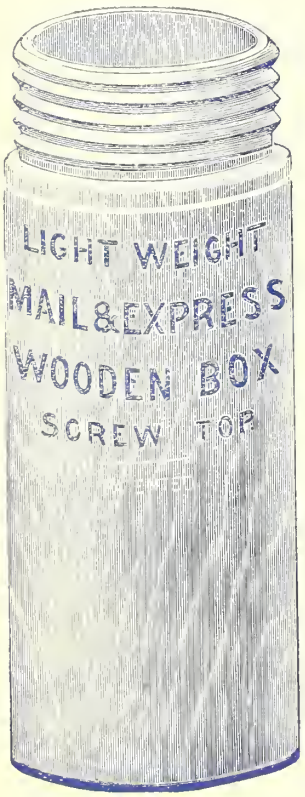
LIGHT WEIGHT MAIL AND EXPRESS

TURNED WOODEN BOXES

(SCREW TOP).



Our Screw Top Turned Wooden Boxes are the cheapest and lightest receptacles made for sending samples or packages by mail or express. They are strong, safe, inexpensive and attractive.







SPECIAL SIZES MADE TO ORDER.

The following are the different stock sizes of these boxes:

Sizes.	Inside Msremts. Length.	Diameter.	Gross in Case.	Per Gross.
× No. 1	$2\frac{3}{4}$	$\frac{9}{16}$	50	5/10
× No. 2	3	$\frac{3}{4}$	30	6/8
× No. 3	$3\frac{1}{3}$	$\frac{7}{8}$	20	8/4
× No. 4	$4\frac{1}{8}$	$1\frac{3}{16}$	12	12/6
× No. 5	$4\frac{1}{2}$	$1\frac{7}{16}$	8	15/10
× No. 6	5	$1\frac{3}{4}$	5	25/-
× No. 7	$5\frac{1}{2}$	2	3	31/3
× No. 8	$6\frac{1}{2}$	$2\frac{1}{4}$	2	37/6

ALSO ANOTHER SERIES.

Sizes.	Inside Msremts. Length.	Diameter.	Gross in Case.	Per Gross.
× ½ oz.	$3\frac{1}{4}$	$1\frac{1}{8}$	14	12/6
× 1 ,,	$3\frac{3}{4}$	$1\frac{7}{16}$	8	13/9
× 2 ,,	$4\frac{3}{8}$	$1\frac{5}{8}$	6	24/2
× 3 ,,	$5\frac{1}{8}$	$1\frac{7}{8}$	4	32/1
× 4 ,,	$5\frac{5}{8}$	2	3	37/1

SOLE AGENTS FOR GREAT BRITAIN AND IRELAND

MAY, ROBERTS & CO., LTD.,

7, 9 & 11, Clerkenwell Road, LONDON, E.C., and 16, Westmoreland Street, DUBLIN.

STOCK IS KEPT IN LONDON OF THE SIZES MARKED X.

ESTABLISHED 1847.

THE MOST EXTENSIVE MANUFACTURERS OF TURNED WOODEN BOXES IN THE WORLD.

ESTES' Wooden Safety VIAL-BOXES

(PATENTED)

FOR ENCLOSING HOMŒOPATHIC VIALS.



	⅛ dr.	...	100	gross in a case	...	per gross	1/6		3 dr.	...	40	gross in a case	...	per gross	4/2
	¼ ,,	...	100	,,	,,	...	,, 1/8	×	4 ,,	...	30	,,	,,	...	,, 5/1
×	½ ,,	...	80	,,	,,	...	,, 2/6		5 ,,	...	25	,,	,,	...	,, 5/6
×	1 ,,	...	70	,,	,,	...	,, 2/9		6 ,,	...	20	,,	,,	...	,, 6/8
	2 ,,	...	50	,,	,,	...	,, 3/6	×	8 ,,	...	15	,,	,,	...	,, 8/4

SOLE AGENTS FOR THE UNITED KINGDOM—

MAY, ROBERTS & CO., LTD.,

7, 9 & 11, Clerkenwell Road, LONDON, E.C. and 16, Westmoreland Street, DUBLIN.

STOCK IN LONDON OF ITEMS MARKED X.

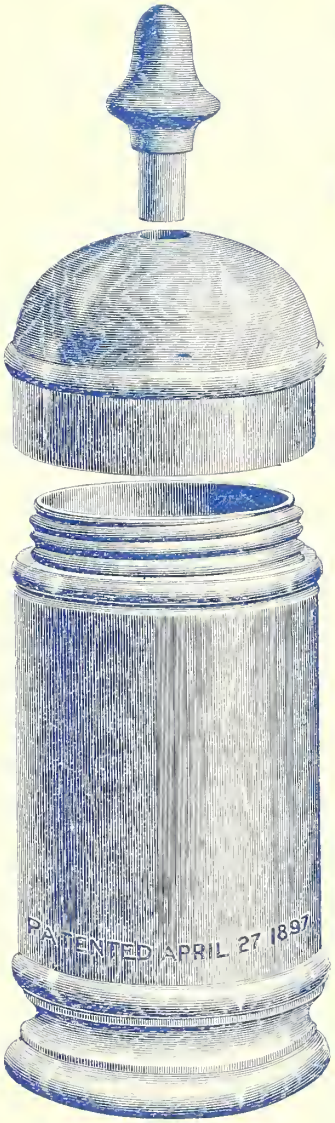
— ESTABLISHED 1847.

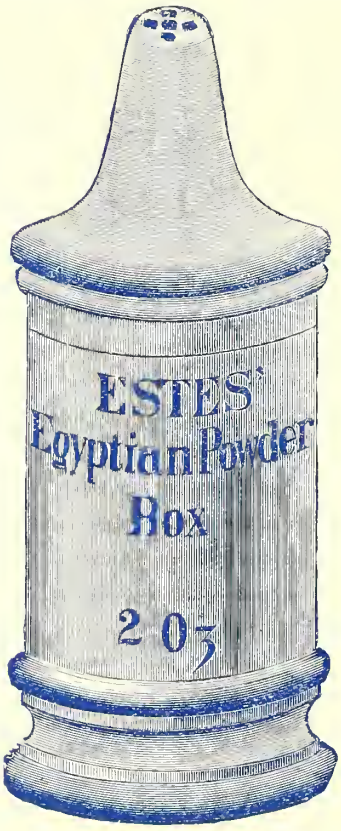
THE MOST EXTENSIVE MANUFACTURERS OF TURNED WOODEN BOXES IN THE WORLD

E. B. ESTES & SONS'

Turned Wooden — Insect — Powder Boxes.

Patented in America, January 12th, 1892.







× ESTES' EGYPTIAN POWDER BOX, 2 oz., 10 gross in a case ... ... 27/6 gross.
× " " " " 4 oz., 6 " " ... ... 31/3 "
" CALIFORNIA INSECT POWDER BOX, 2 oz., 10 gross in a case ... 11/8 "
" " " " 4 oz., 7 " " ... 20/10 "
" SPANISH TOOTH POWDER BOX, 1 oz., 12 gross in a case ... 25/- "
" " " " 2 oz., 7 " " ... 31/3 "

The "Egyptian" Boxes and Spanish Tooth Powder Boxes are furnished with only tops and bases polished, or polished all over at same prices.
The "Egyptian" Boxes are very handsomely polished, and would make a very fine package for Tooth, Face or Glove Powder, as well as Insect Powder.

SOLE AGENTS FOR GREAT BRITAIN AND IRELAND—

MAY, ROBERTS & CO., Ltd.,

7, 9 & 11, Clerkenwell Road, London, E.C. & 16, Westmoreland Street, Dublin.

NOTE. Illustrations are Exact Size of Goods. Stock is kept in London of those marked X.

— ESTABLISHED 1847. —

THE MOST EXTENSIVE MANUFACTURERS OF TURNED WOODEN BOXES IN THE WORLD.

E. B. ESTES & SONS'

Turned Wooden Puff and Powder Boxes

Face Powder Boxes, Tooth Powder Boxes, Puff Boxes.

BEAUTIFULLY DESIGNED. ARTISTICALLY TURNED. BRILLIANTLY POLISHED.



The Tooth Powder Boxes we furnish with a plain, smooth finish or a polish finish. The Puff Boxes are all polished in the natural colour of the wood, which is a silver white, and we give them the very highest possible polish, and we will warrant them superior to any other Puff Boxes made.



ESTES' POLISHED PUFF BOXES.

	Per gross.
Estes' No. 5 Almada Puff Box, polished white, $2\frac{3}{4}$ in. diam. by $2\frac{3}{4}$ in. high 5 gross in a case	11/8
Estes' No. 6 Almada Puff Box, polished white, 3 in. diam. by 3 in. high, 4 gross in a case	50/

ESTES' FACE AND TOOTH POWDER BOXES.

POLISHED AND UNPOLISHED.

	Per gross.
× Estes' $2\frac{1}{2}$ oz. Florence Powder Box, unpolished, $2\frac{7}{16}$ in. diam. by $1\frac{1}{4}$ in. high, 12 gross in a case	14/7
Estes' $2\frac{1}{2}$ oz. Florence Powder Box, polished, $2\frac{7}{16}$ in. diam. by $1\frac{1}{4}$ in. high, 12 gross in a case	22/11
× Estes' $4\frac{1}{2}$ oz. Florence Powder Box, unpolished, 3 in. diam. by $1\frac{3}{8}$ in. high, 8 gross in a case	25/-
× Estes' $4\frac{1}{2}$ oz. Florence Powder Box, polished, 3 in. diam. by $1\frac{3}{8}$ in. high, 8 gross in a case ...	33/4
× Estes' Swan-Down Powder Box, unpolished, 3 in. diam. by 1 in. high, 10 gross in a case ...	20/10
Estes' Swan-Down Powder Box, polished, 3 in. diam. by 1 in. high, 10 gross in a case ...	29/2

SOLE AGENTS FOR GREAT BRITAIN AND IRELAND—

MAY, ROBERTS & CO., Ltd.,

7, 9 & 11, Clerkenwell Road, London, E.C. & 16, Westmoreland Street, Dublin.

NOTE.—Illustrations are Exact Size of Goods. Stock is kept in London of the sizes marked X.

Telephones :
LONDON, 941 CENTRAL.
„ 4487 „
DUBLIN, 1313 NATIONAL.

Telegraphic Addresses .
"FEEDING BOTTLES, LONDON."
"FEEDERS, DUBLIN."

Cable Address :
"TOOTHBRUSH, LONDON."
A.B.C. Code 4th & 5th Editions.

MAY, ROBERTS & Co., LTD.,

Wholesale

Druggists' Sundriesmen,

(INCLUDING SURGICAL AND VETERINARY INSTRUMENTS.)

Dealers in Patent Medicines, Proprietary Articles, Perfumery, Mineral Waters, Lozenges, Photographic Goods, etc., etc.

7, 9 and 11, CLERKENWELL ROAD, LONDON, E.C.

(Three minutes' walk from Aldersgate Street Station, Metropolitan Railway).
Tramcars—East and West—pass the door.

And 16, Westmoreland Street, DUBLIN.

☞ *Our Illustrated Price List*

572 PAGES

Issued Half-yearly—1st February, 1st August—will be sent **POST FREE** on receipt of Business Card.

Ask for Terms and save Expenses.



I want a Place in your Business

Will you read what I can do ?



I cost you 3/6

and help you to increase your business!

If you could engage a successful business man—an admitted expert—to work for you permanently for one payment of 3/6, would it not be worth your while ?

You can do just that to-day by sending for a copy of "Successful Salesmanship," the book of money-making ideas, which contains many valuable hints and suggestions on **YOUR** business.

Its business is to increase YOUR business.

It is packed full of live ideas on bringing in the customers, attracting the greatest number of possible buyers, advertising, getting employment, increasing sales, enlarging profits, etc., etc.

It is meant for all engaged in business, whether they are selling their goods or their brains, to help them to sell more at a bigger profit.

It is called

"Successful Salesmanship"

By H. HOLFORD BOTTOMLEY.

These are the contents :

Chapter I.—First Principles of Salesmanship.
" II.—Selling Brains.
" III.—Suggestion as a Selling Force.
" IV.—The Study of Character.
" V.—The Salesman behind the Counter.
" VI.—The Salesman on the Road.
" VII.—Window-Dressing.
" VIII.—Wholesale Advertising.
Chapter IX.—Retail Advertising.
" X.—The Mail Order Business (1).
" XI.—The Mail Order Business (2).
" XII.—Sales.
" XIII.—Insurance Salesmanship.
" XIV.—Starting a Retail Business.
" XV.—The Ideal Salesman.

Also articles by prominent men on selling all kinds of goods, including Textiles, Tobacco, Motor-Cars, Drugs, Draperies, Furniture, Books, etc., etc.

If I give you but one idea that will increase your business, it repays you the price many times over.

Read what the Papers are saying about me!

The Daily Telegraph says :

"Dealing with the subject comprehensively, and in an eminently practical spirit, the volume is obviously written by an expert who has not only studied the subject thoroughly but has the power of expressing himself clearly and forcibly."

The Daily Chronicle says :

"The standard work on the subject written by the greatest living expert. It has received the seal of approval from the most prominent business men in London, who have signified their appreciation of the value of the book by contributing articles on salesmanship as applied to their own particular business. No such comprehensive and valuable work has yet appeared. It contains chapters on every conceivable form of salesmanship and should be of use to business men and women of all kinds."

The Daily Express says :

"Of the utmost practical value. Written by Mr. H. Holford Bottomley, a foremost expert in the science of business, this work will undoubtedly become the standard work on the subject. It contains a perfect gold-mine of good advice. Mr. Bottomley goes intimately into every conceivable form and ramification of the business of selling goods. It is quite the best business book of the year."

Lloyd's News says :

"A most useful and practical book on a subject of the greatest interest to business men. It is packed with money-making ideas on getting employment, commercial travelling, window dressing, shop-keeping, advertising, and, in fact, every phase of salesmanship."

The Morning Leader says :

"A remarkable book—honest and valuable. From the salesman's point of view it is perfect in an alert, startling style of suggestiveness. All advertisers and salesmen should possess it, for the possibilities of legitimate business have never been so plainly and interestingly shown ; it is full of priceless detail."

THERE ARE MANY OTHERS, TOO, BUT ALL IN THE SAME STRAIN

Are my Testimonials good enough for you ?

I will come on Trial

To give you a chance of testing what I can do.

Send in the form below, properly filled out, together with P.O. for 3/6, and should you be disappointed with the book you may return it within 3 days and receive back your money.

Clark's Salesmanship Book Dept.,

1, 2 & 3, Chancery Lane, London, W.C.

Sirs,

Please find enclosed P.O. for **3/6** *(Colonial customers should forward 4/- to include postage), for which forward me, post free, a copy of your book* **"Successful Salesmanship."** *If this book does not meet with my approval, you agree to return me this money, provided the book is returned in good condition within three days (two months allowed to Colonial customers).*

Date.....

Name .....

Address .....

.....

.....

CLARK'S SALESMANSHIP BOOK DEPT

1, 2 & 3, CHANCERY LANE, London, W.C.

AGENTS FOR AUSTRALASIA—

George Robertson & Co. Ltd., Melbourne, Sydney, Adelaide, Brisbane & New Zealan

LMS

GLORIA TONIC

Sold in EVERY Country of the World.

The Cure FOR RHEUMATISM AND GOUT

Sold in EVERY Country of the World.

John A. Smith,
(Proprietor),
Bangor House,
London, England.

GLORIA TONIC

ASTOUNDING TESTIMONIALS

I have cured 10,000 Sufferers from all parts of the World, including people in EVERY COUNTY IN THE UNITED KINGDOM.

JOHN A. SMITH, Bangor House, Shoe Lane, LONDON, E.C.

RHEUMATIC SUFFERERS! READ what your Fellow-countrymen say of "GLORIA TONIC."

FROM AMERICA.

The Rev. MICHAEL D. O'BRIEN, Canon of All Saints' Cathedral, Milwaukee, U.S.A., writes:—

"I am glad to be able to add the expression of having a good word for 'Gloria Tonic Tablets.' My brother was suffering from a severe attack of Rheumatism, and I induced him to try a box of your 'Gloria Tonic Tablets.' He says he owes more, and he has not since had the slightest return of the malady."

WEST COAST OF AFRICA.

John, Northern Nigeria.

Dear Sir,

From the depth of my heart I give you permission to publish my letter as I am anxious to help you bring the curative power of 'Gloria Tonic' before the notice of all sufferers, as it has been so successful in relieving me of my lamentable ailment.

Z. DANIEL.

CURES IN IRELAND.

HIGHLY RECOMMENDED.

Rathkenny, Gunnerain, Ireland.

Dear Sir,—I am sorry for not having informed you sooner of the good results of your "Gloria Tonic" in my case. I suffered from Rheumatism for a long time and tried many other remedies, but none did me any good, until I used "Gloria Tonic." I shall highly recommend it to my friends.

Yours faithfully,

EDWARD POPE.

Ellipsmagh, Castletown, Ireland.

Dear Sir,—It gives me much pleasure to let you know that I have had an increase of Rheumatism ever since very cold. Before using your remedy I could not stretch my limbs or get about, but I can now do this with ease, and I am very thankful for your remedy.

Yours truly

MRS. D. GLASHOW.

Donaghan, Glenlough.

Dear Sir,—I 9 with feelings of gratitude I send you these few lines thanking you for your "Gloria Tonic." I suffered for two years with severe pains and could not sleep properly, but now these pains have entirely gone, thanks to "Gloria Tonic."

Yours, &c.

L. BYRNE.

CURES IN AUSTRALIA.

Ferry Lane, Maryborough, Queensland

Dear Sirs,—I beg to send you my testimony for the press over your "Gloria Tonic" has achieved in my case. I have been a great sufferer of Rheumatism for years, but am thankful to say that I have at last found a cure for it. I think "Gloria Tonic" the best of all Rheumatic remedies, and am sure few have gone through as much suffering as I have.

Faithfully yours,

CHAS. PRICKETT.

Wellington, Stradbroke, West Australia.

Dear Sir,—I am glad to inform you that the Rheumatism has left me now. All my friends want to know what has cured me, and I am very happy to tell them that "Gloria Tonic" has overwhelmed me. With many thanks for your remedy, I remain,

Faithfully yours, WM. TOMAS.

Guildford, Victoria.

Dear Sir,—I feel that it is now my duty to write and thank you for your splendid remedy, "Gloria Tonic." As I'd years of age, and have suffered for many years with Rheumatism, and could not walk without a stick, but I am now gladly say I have thrown away. When taking your medicine I believed your Rheumatism, and I heartily thank you for it, and for what it has done for me.

Yours faithfully, GEO. W. JOHNSTON.

Year Sir—As per Loan Gloria previous correspondence, my daughter has been a perfect cripple in Rheumatism, but is now an illegitimate relationship to the same. She has been entirely cured by your "Gloria Tonic," and is now in perfect health. Words fail me to express my gratitude for the wonderful cure effected by "Gloria Tonic," so, as it is your remedy, I think it is a great pity "Gloria Tonic" is not more widely known in Australia.

Yours faithfully yours, T. J. ANDERSON.

47, Gould Street, Sydney, N.S.W.

Dear Sir,—I have much pleasure in stating that I am one of the best of health, and have never felt better since I took "Gloria Tonic" has proved a marvellous cure in my case, and has wrought new more marvellous in other cases where I have recommended it. In the case of a little boy, who had been troubled by various doctors, his good mother got him "Gloria Tonic" now completely restored, and he is now able to run about freely and eat well. I could mention other cases with same Yours respectfully, Mrs. E. S. FIELD.

CURES IN SOUTH AFRICA.

Turvey Post, Cape Colony.

Dear Sir,—I am now well and strong, and have not had any attack of Rheumatism since I took your "Gloria Tonic." From the bottom of my heart I thank you for the medicine you sent me, and I shall very gladly recommend it. Yours sincerely, E. S. WAINWRIGHT.

Cradle Cala, Tarkhisland, South Africa.

Dear Sir,—I have much pleasure in telling you how the effect I used "Gloria Tonic." I was sick from inability with Rheumatism, and I have not had any reminder of the painful malady since. I am so glad to be entirely cured of Rheumatism through your "Gloria Tonic." that I shall do all in my power to recommend it to others wholefully. MISS I. HASTINGS.

AFTER FIVE YEARS.

59, Moore Street, Quigley,

East Griffin, South Africa.

Dear Sir,—You will be pleased to hear that I have never had so bad with Rheumatism since I took your "Gloria Tonic," now do a years ago, and am living proof to the value that your wonderful remedy. I should like to be able to let you see the treat. I shall be glad to answer any enquiries.

Yours very sincerely MRS. E. E. TURNER.

TESTIMONY FROM CAPE COLONY.

Wellwyeon, South Africa

Dear Sir,—I am heartily thankful to inform you how some and am indeed glad to assist that after using two bottles of "Gloria Tonic" from the terrible effects of my right hand, which had been previously rendered useless and, and commencing with your remedy, I am completely cured. I can now walk after using your "Gloria Extract Ointment," for I found although her disease yet she is entirely cured of Rheumatism.

Yours thankfully,

J. WILLIAMS.

NEW ZEALAND.

Otaki, Canterbury, New Zealand

Dear Sirs,—Your may make use of my letter as a testimonial if you please, as my husband still keeps very well. I am pleased to say, and whenever I am recommend your remedy, I shall not fail to do so.

Yours truly

MRS. W. O. SAUL.

CURES IN SWITZERLAND.

Helsinki, 5, Basel, Switzerland.

In spite of my 77 years I am now perfectly well, which I owe to your excellent remedy.

F. WIPER.

Cornerbrook, 12, St. Gallen, Switzerland.

I must thank you very much, I am say that I owe my present good health to your excellent Tablets.

EMMY SAUTER.

Your remedy had a miraculous effect.

Lenzo, Switzerland.

I can tell you with great joy that "Gloria Tonic" has perfectly cured me from my terrible sufferings. I have been suffering for ten years with Sciatica, and nothing I tried did me the least good, but after having used your excellent remedy for six weeks I feel perfectly well. I also owe to my total work without the slightest trouble, and am only my "Gloria Tonic" has a marvellous effect.

JOSEF ANTONIA DURBAN, Merchant.

CURES IN BELGIUM.

Rue de la Caillou 33 Brussels

With great pleasure I can tell you that after having been a prisoner for two years, am being able to leave my room owing to Rheumatism. I have been able to go out yesterday and return to the height twenty weather which we had in Brussels. As all I owe to you and to your wonderful remedy "Gloria Tonic." I am not tell you how grateful I am to you and how glad that a friend does any attention to it. I shall never cease praising its remedy, which has worked wonders for me.

F. DELLEROSE

Rue de Soleil, Ronsis, Belgium

I am really very glad that you have sent me a few samples of "Gloria Tonic," as I am totally cured of Rheumatism, and I have no pain at all now as I wanted to be true that the pain did not return. I thank you most heartily for relieving me of that great malady.

• LEON RENARD

Rue de l'Allée verte, 129, Brussels.

I had Rheumatism and also first in the big toe of my right foot, and nothing good relieved myself. I was unable to walk properly. After using five bottles I felt quite well and it is now seven months since. I have not felt the slightest return, although I used to be attacked every two or three weeks. I can only express my sincere thanks.

D'HAEN LAMBERT

123, Rue Jolly, Brussels.

I am sending you by the mail 20 francs. Please send me at once five bottles of "Gloria Tonic" for Great Rheumatism. I have had no more attacks of them, and I am feeling very well. It is over 12 months since. I have not an attack.

H. J. VERLINDE

CURES IN GERMANY.

Lolenau, Posen, Germany

In all my life I have not been able to write such a really pleasant letter as the one, in which I can thank you for having cured me of my Rheumatic sufferings of 11 years' standing. I tried almost everything in vain and of it, but nothing has had any effect until I used "Gloria Tonic." After five bottles I felt perfectly well and could undertake my usual work. I must express my thanks in have now and through what I have been cured.

L. KAUNAS, Furniture Manufacturer

Friedrichstr. Berlin.

I was my present perfect health to "Gloria Tonic." I shall not fail to recommend it wherever possible.

FR. GAISE

Carl Loser Ufer 60 Berlin

I am able to inform you with great joy that I am now thoroughly cured through the use of "Gloria Tonic" from 40 years' misery as Lumbago.

HANS. FRIEDE

Hamburg

I was quite bed-less and very ill. I am now on the best of health, which I am entirely to a treatment with "Gloria Tonic." KARL GERHARDT

Rosenstrasse Mannheim, Prussia.

I must express my unboundedest thanks for your wonderful remedy. It has absolutely cured me.

JOHN WEBSTER.

Philippsdorf 96, Wurtemberg.

Since my 18th year I have been suffering from Rheumatism. I am now 52 years old and can only say that I am now totally free from it, since I took the remedy which I was send to me by three months ago. The Tablets were well with me and I feel very well.

H. WILHELMSEN

An Sand 12, Nurnberg, Bavaria.

Miss was ordered a very severe cure. The doctors told my husband I should never be able to walk again. But since the treatment with "Gloria Tonic" has actually cured me I cannot sufficiently thank you.

EMILIE MEDICUS

Schützenstr. 729, Cöln Ehrenfeld

I must express my gratefulness. I am thoroughly recovered, and do not feel the slightest discomfort after having been very seriously afflicted by Gout.

JEAN KLEIN

CURES IN FRANCE.

Rue de Trocpis, Paris

A few days ago I finished the treatment with "Gloria Tonic," and I am pleased to say that I am completely cured of my troublesome Sciatica. For over 12 months I could scarcely walk, and after a few days treatment with it, I was quite well. I am now very thankful and feel as if I had my younger days back again. I am using your remedy. You have rendered me great service, and I shall recommend it to all sufferers.

A. GARIAUD.

La Lalleau Lantern, Par de Calais

I am happy to tell you that "Gloria Tonic" has quite cured me. I had more than half my body covered with your remedy my illness would have and entirely disappeared.

EMILIE DUBOIS

24, Rue Marmaler, Paris.

Before answering your letter I wished to be quite sure of the effects of your wonderful remedy. Now I am pleased to have passed clear every "Gloria Tonic," I feel inspired to write and thank you for your kindness. I certify that "Gloria Tonic" is above all other medicines. I shall recommend it to all sufferers.

M. H. MAIER

St. Trophime, Monastier, Marvejols

Since using "Gloria Tonic," my husband has quite got rid of his Rheumatism. We feel that we owe our best to thank you, and he can you to use my name and recommend it to all sufferers.

PLOVIET FILS.

Rue des Rabats, Bordeaux

I am a few lines to let you know that "Gloria Tonic" has done me a great deal of good and I can now go back to my work again. I have not been able to do for a long time. I can very much indeed of it.

MRS. GUERINEAU.

CURES IN GERMANY.

Rue de Trocpis, Paris

A few days ago I finished the treatment with "Gloria Tonic," and I am pleased to say that I am completely cured of my troublesome Sciatica. For over 12 months I could scarcely walk, and after a few days treatment with it, I was quite well. I am now very thankful and feel as if I had my younger days back again. I am using your remedy. You have rendered me great service, and I shall recommend it to all sufferers.

A. GARIAUD.

La Lalleau Lantern, Par de Calais

I am happy to tell you that "Gloria Tonic" has quite cured me. I had more than half my body covered with your remedy my illness would have and entirely disappeared.

EMILIE DUBOIS

24, Rue Marmaler, Paris.

Before answering your letter I wished to be quite sure of the effects of your wonderful remedy. Now I am pleased to have passed clear every "Gloria Tonic," I feel inspired to write and thank you for your kindness. I certify that "Gloria Tonic" is above all other medicines. I shall recommend it to all sufferers.

M. H. MAIER

St. Trophime, Monastier, Marvejols

Since using "Gloria Tonic," my husband has quite got rid of his Rheumatism. We feel that we owe our best to thank you, and he can you to use my name and recommend it to all sufferers.

PLOVIET FILS.

Rue des Rabats, Bordeaux

I am a few lines to let you know that "Gloria Tonic" has done me a great deal of good and I can now go back to my work again. I have not been able to do for a long time. I can very much indeed of it.

MRS. GUERINEAU.

CURES IN HOLLAND.

Pietersmolen ter Leur 19, Amsterdam.

I had suffered with Rheumatism for 15 years, and could not walk or even stand, and had to lie down all day. At last I heard of "Gloria Tonic," and after having taken the two of the same I found myself free from all pain. Everybody wonders at my wonderful cure. I can go about my work without any pain, and I shall be only glad to recommend "Gloria Tonic," and tell everybody of my wonderful cure.

M. G. FELDMAN.

Binnenkant 17, Rotterdam.

Monday I beg to let you know that I have received your "Gloria Tonic," and am pleased to say that it has done me good. I have taken two-and-a-half bottles, and I am now able to go to my work. I am very thankful to you for your "Gloria Tonic," which I shall always recommend.

J. GRAAF.

Mr. M Imes, van Ostrivaal 146, Den Haag sends his photograph, and asks me to publish it in the news papers, as it let people know that he has been cured by "Gloria Tonic."

Dr Hoe M M en Leeuw, of Twijkkerveld presenst Leeuwhor H. Gaal, writes that he has been entirely cured by the use of "Gloria Tonic" by which he heartily thanks to and that he is taking it again. He will all recommend it to the Mother of the present Queen Wilhelmina of Holland, who was a sufferer likewise.

CURES IN AUSTRIA.

Wernsdorf, Ornein, Austria.

Dear Sirs,—I have thanked Providence many a time for helping me to find your remedy. I used only four bottles and am now quite recovered from eight years suffering.

Sincerely yours,

JEAN BORSIG

Commander of Police.

Niederösterreichhof, Bohemia, Austria.

As for me I am not recommend your remedy, and really quite wonderfully to my severe illness. Seven doctors tried to help me, and I consulted the Professor Dr. Mrm M SCHEIFFMAN.

Krakau, Austria.

My very best thanks for "Gloria Tonic." As regards my complaint it has done most anything in its effect. I sometime your remedies a gift from heaven for relieving mankind. For the last three years I have been suffering with terrible pain, and my relations expected that I would succumb, because there was heart trouble as well, but since I have been taking "Gloria Tonic" I have left on every pain and my general health is improving day by day.

J. STOSSEY, Corporal,

Reg. 56, 3rd Comp.

CURES IN SWITZERLAND.

Helsinki, 5, Basel, Switzerland.

In spite of my 77 years I am now perfectly well, which I owe to your excellent remedy.

F. WIPER.

Cornerbrook, 12, St. Gallen, Switzerland.

I must thank you very much, I am say that I owe my present good health to your excellent Tablets.

EMMY SAUTER.

Your remedy had a miraculous effect.

Lenzo, Switzerland.

I can tell you with great joy that "Gloria Tonic" has perfectly cured me from my terrible sufferings. I have been suffering for ten years with Sciatica, and nothing I tried did me the least good, but after having used your excellent remedy for six weeks I feel perfectly well. I also owe to my total work without the slightest trouble, and am only my "Gloria Tonic" has a marvellous effect.

JOSEF ANTONIA DURBAN, Merchant.

CURES IN CERMANY.

Lolenau, Posen, Germany

In all my life I have not been able to write such a really pleasant letter as the one, in which I can thank you for having cured me of my Rheumatic sufferings of 11 years' standing. I tried almost everything in vain and of it, but nothing has had any effect until I used "Gloria Tonic." After five bottles I felt perfectly well and could undertake my usual work. I must express my thanks in have now and through what I have been cured.

L. KAUNAS, Furniture Manufacturer

Friedrichstr. Berlin.

I was my present perfect health to "Gloria Tonic." I shall not fail to recommend it wherever possible.

FR. GAISE

Carl Loser Ufer 60 Berlin

I am able to inform you with great joy that I am now thoroughly cured through the use of "Gloria Tonic" from 40 years' misery as Lumbago.

HANS. FRIEDE

Hamburg

I was quite bed-less and very ill. I am now on the best of health, which I am entirely to a treatment with "Gloria Tonic." KARL GERHARDT

Rosenstrasse Mannheim, Prussia.

I must express my unboundedest thanks for your wonderful remedy. It has absolutely cured me.

JOHN WEBSTER.

Philippsdorf 96, Wurtemberg.

Since my 18th year I have been suffering from Rheumatism. I am now 52 years old and can only say that I am now totally free from it, since I took the remedy which I was send to me by three months ago. The Tablets were well with me and I feel very well.

H. WILHELMSEN

An Sand 12, Nurnberg, Bavaria.

Miss was ordered a very severe cure. The doctors told my husband I should never be able to walk again. But since the treatment with "Gloria Tonic" has actually cured me I cannot sufficiently thank you.

EMILIE MEDICUS

Schützenstr. 729, Cöln Ehrenfeld

I must express my gratefulness. I am thoroughly recovered, and do not feel the slightest discomfort after having been very seriously afflicted by Gout.

JEAN KLEIN

TESTIMONY FROM ITALY.

Sir,—With this I am giving you very good news, because I can tell you that I scarcely satisfied with your "Gloria Tonic." It has completely cured me. Not only was I a sufferer from Rheumatism, but I had Neuralgia and my digestion was very bad; one of my sons was quite prostrated by several years. "Gloria Tonic" has completely cured me of all this. I feel perfectly well. My husband also has taken "Gloria Tonic" with good success.

Yours truly,

Madame CONSTICE FORCAL.

CURE FROM PORTUGAL POSSESSION.

Madeira (c/o Shanly Bros. & Co.)

Dear Sir,

I beg to state that, after three years' long suffering of Rheumatism, and almost an invalid to bed without being able to move, you "Gloria Tonic" has made a new man of me, without a pain or ache. It is a great pleasure to me to recommend "Gloria Tonic" to all my friends.

Faithfully yours,

JOSE L. A. AURELIA

CURES IN BRITISH WEST INDIES.

Carriac, St. Lucia.

Dear Sir,—I shall always recommend "Gloria Tonic," and you are at perfect liberty to publish my testimony to the benefit your "Gloria Tonic" has given me. For it has completely cured me of Rheumatism. Yours very truly.

LEAH E. HARRISON

Anna Road, Margate, Trinidad, B.W.I.

Dear Sir,—I shall be very pleased to forward your agent, as the few persons I have recommended it to are used to show returns of "Gloria Tonic" and I am pleased to say that I am keeping well and have not had any recurrence of my Rheumatic trouble.

Yours faithfully, DAVID LAZRAS.

Testimony from St. Lucia.

Roland, St. Lucia, B.W.I.

Dear Sir,—I beg to express my gratitude for the benefit received from "Gloria Tonic." for I cannot thank you too much as I am now a strong man where as I was quite a wreck. I had been confined to my bed for some time with Rheumatism, but the pains have left me entirely, so I am grateful. Let to whom I ever recommend your remedy, is able to treat myself as highly of your remedy as I can.

Yours thanking you,

I remain,

Yours very truly, H. MORLEIN

Dear Sir,—I am glad to say I have found "Gloria Tonic" very successful, and it has entirely cured me. My friends and self are both very grateful to you.

Yours sincerely,

W. J. TATLOCK.

ENTIRELY CURED

Dear Sir,

I have been requested by Mr. THOMAS COLLIER, of North Driffield, some failing, to inform you that since he has taken "Gloria Tonic" he is now entirely cured. This is now two years or more, and not a sign of the old complaint, Rheumatism, has he had since then. You may make whatever use you like of this testimony.

Sincerely yours,

T. H. BOLTON.

6, Beaumont Street, Cranbury, York

Dear Sir,

I have much pleasure in stating that your "Gloria Tonic" has completely cured me of Rheumatism, and am able to keep at my work regularly, without any signs of Rheumatism returning.

Yours truly,

WM. BRATTON.

AFTER SIX YEARS

Trawsvde, Morton, Gainsborow, Lincoln.

Dear Sir,

You will see by this that I have not forgotten. It is nearly six years since I wrote for "Gloria Tonic," and, thanks to the use of your remedy, I am as well to-day as I have ever been in my life, and I have never felt anything of Rheumatism, since I took "Gloria Tonic."

Faithfully yours,

E. T. COOK.

A PERMANENT CURE.

St. Louis Road, Carrington, Oughtibun

Dear Sir,

It is Pure from close I was cured by your "Gloria Tonic," and I have not had to return to the complaint.

Your grateful and sincere well wisher

C. W. MARLEY

RECOMMENDATION

107, Down St., Mellon St. Leicester

Dear Sir,—Will you please send a sample to my friend to whom I have recommended "Gloria Tonic." Quite send me of "Gloria Tonic."

Yours, etc.

A. JOWSON

Dear Sir,

I feel your "Gloria Tonic" has cured me of Rheumatism, and I feel very pleased to tell everybody that "Gloria Tonic" I and from you have taken away my trouble, and I have had no return.

I shall recommend it.

Yours truly

CLARA DIBBY.

Dear Sir,

I thank you very much for "Gloria Tonic." It has entirely cured me of Rheumatism of many years standing, and I have not had any return of the complaint, and always speak well of "Gloria Tonic."

Yours sincerely,

A. DUNCAN

Dear Sir,

After taking two bottles of "Gloria Tonic" I believe I am cured, and I am glad to say that I am completely cured of Rheumatism. I have been in pain and cold some, but have felt no pain. I am extremely thankful to you for what "Gloria Tonic" has done for me.

Yours sincerely,

A. DUNCAN

Dear Sir,

I thank you very much for "Gloria Tonic." It has entirely cured me of Rheumatism of many years standing, and I have not had any return of the complaint, and always speak well of "Gloria Tonic."

Yours sincerely,

A. DUNCAN

CURES IN BELGIUM.

Rue de la Caillou 33 Brussels

With great pleasure I can tell you that after having been a prisoner for two years, am being able to leave my room owing to Rheumatism. I have been able to go out yesterday and return to the height twenty weather which we had in Brussels. As all I owe to you and to your wonderful remedy "Gloria Tonic." I am not tell you how grateful I am to you and how glad that a friend does any attention to it. I shall never cease praising its remedy, which has worked wonders for me.

F. DELLEROSE

Rue de Soleil, Ronsis, Belgium

I am really very glad that you have sent me a few samples of "Gloria Tonic," as I am totally cured of Rheumatism, and I have no pain at all now as I wanted to be true that the pain did not return. I thank you most heartily for relieving me of that great malady.

• LEON RENARD

Rue de l'Allée verte, 129, Brussels.

I had Rheumatism and also first in the big toe of my right foot, and nothing good relieved myself. I was unable to walk properly. After using five bottles I felt quite well and it is now seven months since. I have not felt the slightest return, although I used to be attacked every two or three weeks. I can only express my sincere thanks.

D'HAEN LAMBERT

123, Rue Jolly, Brussels.

I am sending you by the mail 20 francs. Please send me at once five bottles of "Gloria Tonic" for Great Rheumatism. I have had no more attacks of them, and I am feeling very well. It is over 12 months since. I have not an attack.

H. J. VERLINDE

CURES IN FRANCE.

Rue de Trocpis, Paris

A few days ago I finished the treatment with "Gloria Tonic," and I am pleased to say that I am completely cured of my troublesome Sciatica. For over 12 months I could scarcely walk, and after a few days treatment with it, I was quite well. I am now very thankful and feel as if I had my younger days back again. I am using your remedy. You have rendered me great service, and I shall recommend it to all sufferers.

A. GARIAUD.

La Lalleau Lantern, Par de Calais

I am happy to tell you that "Gloria Tonic" has quite cured me. I had more than half my body covered with your remedy my illness would have and entirely disappeared.

EMILIE DUBOIS

24, Rue Marmaler, Paris.

Before answering your letter I wished to be quite sure of the effects of your wonderful remedy. Now I am pleased to have passed clear every "Gloria Tonic," I feel inspired to write and thank you for your kindness. I certify that "Gloria Tonic" is above all other medicines. I shall recommend it to all sufferers.

M. H. MAIER

St. Trophime, Monastier, Marvejols

Since using "Gloria Tonic," my husband has quite got rid of his Rheumatism. We feel that we owe our best to thank you, and he can you to use my name and recommend it to all sufferers.

PLOVIET FILS.

Rue des Rabats, Bordeaux

I am a few lines to let you know that "Gloria Tonic" has done me a great deal of good and I can now go back to my work again. I have not been able to do for a long time. I can very much indeed of it.

MRS. GUERINEAU.



TRADE  MARK.



ABLISHED 1863.

MARSH GATE LANE, STRATFORD,
LONDON, E.

The Crown Chemical Works Ltd

SUCCESSORS TO

Scott & Co. and Johnson & Hooper Ltd

and Tuson's Disinfectants Co.

rtificial Essential Oils & Genuine Essential Oils.

RTIFICIAL OTTO OF ROSE.

With or without Stearoptene, at 10 - per oz.

Special price for quantities.

This product answers every purpose of the Natural Otto of Rose in flavour, perfume, and ting properties. The quality without Stearoptene is more soluble and does not require ating before use.

OMPOUND ESSENCES "CROWN BRAND."

Of highest concentration, giving finest Floral Extract by the sole addition of 1 oz. to 1 lb. Spirit of Wine 64 o.p.

FOR ALL PURPOSES.

eliotrope	at 3 - per oz.	Rose de France ...	at 10 - per oz.
lac	„ 6 - „	Sweet Pea	„ 5 - „
ly of the Valley	„ 4 - „	Violette Cypria ...	„ 8 - „
arcissus	„ 5 - „	Violette de Nice ...	„ 7 - „
ew Mown Hay ...	„ 3 6 „	Violette de Parme	„ 5 - „
oblesse Parfum	„ 5 6 „	Violette Ideal ...	„ 8 - „
ppoponax	„ 7 6 „	Violet J.	„ 6 6 „
ose Blanche ...	„ 10 - „		

Full list on application.

THE CROWN CHEMICAL WORKS, Ltd., Stratford, London, E.

THE CROWN CHEMICAL WORKS, Ltd., Stratford, London, E.

For VIOLET PERFUME MAKING.

Violet J. B. ... ... at **10/6** per oz.

For FACE CREAMS, POWDERS, and TALCUM POWDER.

Concentrated for making perfumes.

Cypria Violet ... ... at **16/6** per oz.

For TOILET PARAFFIN.

Does not turn the oil cloudy.

Cypria Violet Oil ... ... at **16/6** per oz.

ARTIFICIAL OIL OF NEROLI.

At **4/6** per oz.

Our Neroli is identical with the pure distillate of fresh Orange Flowers, but stronger and more delicate.

FLORAL OTTOS for CONFECTIONERY. (Highest Concentration.)

COLOURS for CONFECTIONERY.

ARTIFICIAL OILS for MAKING PERFUMES. Full list o applicatio

PHOTO CHEMICALS.

Metol "Crown Brand"	at **22**/- per lb.;	1 oz. bottles 2/-	per lb. extr
Metol Substitute	,, **17/6** ,,	,,	,,
Amidol "Crown Brand"	,, **10**/- ,,	,,	,,

MILK OF SULPHUR "CROWN BRAND."

SUBLIMED SULPHUR "CROWN BRAND."

LIVER OF SULPHUR "CROWN BRAND."

As recommended by the Board of Agriculture and Fisheries against the disease of American Gooseberry Mildew.

In 7 and 14 lb. tins at 7d. per lb. net, carriage paid.

Proportion—1 lb. Crown Liver of Sulphur to 32 gallons of water, to be used as a spray.

THE CROWN CHEMICAL WORKS, Ltd., Stratford, London, E.

Manufacturers of Chemicals for Pharmacy and Industry.

Post Office Telephone 1651. Established 1843.

R·T·DUN

GELATINE CAPSULE MANUFACTURER
AND
MANUFACTURING CHEMIST.

5 OSWALD STREET,
GLASGOW.



IMPORTANT

TRADE ANNOUNCEMENT.

New Series of "OWN NAMED" Enamelled Metal Boxes.

Reserved for Chemists only.

Dear Sir,

At the express desire of many Customers, the PROPRIETOR OF DUN'S CAPSULES has much pleasure in submitting a Series of Unique and Registered Designs in "OWN NAMED" Enamelled Metal Boxes, to embrace the entire variety of Capsules now sold in Cardboard Boxes.

It is unnecessary to point out the advantages of the Metal over the Cardboard Box.

We are now in a position to offer this New Series of Metal Boxes, with own Name enamelled on, at practically the same prices as now charged for Cardboard Boxes.

Chemists requirements will be met as to quantities, etc., etc.

We have pleasure in showing one of our Designs as per illustration.

Yours faithfully,

R. T. DUN.

P.S.—We will rigidly adhere to the highest quality of Drugs obtainable in these products.

TERMS—

NET THREE MONTHS' ACCOUNT

MINIMUM QUANTITY—THREE DOZEN ASSORTED LOTS OF ONE SIZE OF BOX

CARRIAGE PAID PACKAGES FREE

N.B.—A REDUCTION OF 6d. PER DOZEN ON ORDERS OF TWELVE DOZ. BOXES OF ANY ONE KIND WILL BE ALLOWED

RESERVED FOR CHEMISTS ONLY

The "Perfect Modern Method" of taking Nauseous Medicines is found by enclosing same in Gelatine Capsules.

New Series of "OWN NAMED" Capsules in Enamelled Metal Boxes.

	Per Dozen	No. in Each Box
Ammoniated Quinine, 30 min.	4 -	18
" " "	7 -	36
Blaud's No. 2	4 -	24
" " 2	5/-	36
" " 3	4 -	24
" " 3	5 -	36
" " 2, C. Liq. Arsenic, 2 min.	6 -	36
" " 3, " " "	7 -	36
Cascara Sagrada	5 6	24
"	8 -	36
" and Euonymin	7 -	24
Castor Oil, 20 min.	5 -	32
Cod Liver Oil, 20 min.	5 -	32
Copaiba	6 6	36
" and Cubeb	10 -	36
Easton's Syrup, 60 min.	7 -	36
Gregory's Mixture	7 6	32
Hæmoglobin, 5 grs.	7 6	30
Sandal Wood Oil, 10 min.	11/-	24
" " 10 min.	15 -	36
Dog Capsules (Worm)	7 6	15
" " (Tonic and Condition)	7 6	30

RESERVED FOR CHEMISTS ONLY.

FACSIMILE OF
"OWN NAMED" CAPSULE BOX



SHOWING SPACE FOR IMPRINTING
CHEMISTS' OWN NAME.

"THE PALL MALL GAZETTE" of April 19th, 1909, in a special article dealing with Neurasthenia, stated:—"The benefits which thousands of Nervous Invalids have experienced from even a free trial supply constitutes one of the most remarkable of modern triumphs in the scientific world."



"THE GLOBE," in an article on "Nerves," on May 17th last, said: "It is now proved beyond cavil that the discovery of Dr. Hartmann does supply in the only possible way the very food the Nerves require, and in circumstances and amounts which make for speedy and effective cure."

ANTINEURASTHIN.

The sale of Dr. Hartman's "Antineurasthin" (the celebrated and well advertised Brain and Nerve Food) is increasing daily, and in response to the request of many Medical Men who prescribe it regularly in all cases of Neurasthenia, Sleeplessness, Lassitude, Melancholia, Loss of Memory, etc., we are now completing arrangements for it to be supplied through the trade.

"Antineurasthin" is not a patent medicine or drug, but solely a Brain and Nerve Food of expensive composition and manufacture, carefully and scientifically prepared from extracts of certain selected foods (vide recent test case at Mansion House) and has met with the warm approval of the most famous Doctors and Physicians in Europe during the last three years owing to its marvellous recuperative Brain and Nerve-building powers.

WHAT WE DO TO HELP THE CHEMIST.

Thousands of pounds are spent yearly in advertising the merits of "Antineurasthin" in papers and magazines reaching every class of society, and this advertising will be continued on the present large scale. We are always ready and pleased to enter into co-operation with those members of the trade who take an interest in the sale of "Antineurasthin."

We also undertake to give your name and address to applicants in your district, to refer these applicants to you and thus considerably increase your clientele.

TRADE TERMS.

Terms to the trade are 10 per cent. Being a food, "Antineurasthin" requires to be taken regularly, and not in a spasmodic manner; the demand for "Antineurasthin" will, therefore, be a consistent one, and will undoubtedly prove a regular and profitable quick "turn over" line.

Specially favourable terms are granted to chemists giving a window display, for which we supply artistic, attractive showcards (for window and counter use) and any number of dummy boxes.

Write us **now** for full particulars of these terms and a supply of showcards.

THE ANTINEURASTHIN COMPANY,
80, Botolph House, Eastcheap, LONDON, E.C.



Highest Award (Grand Prix) at the International Exhibition for Health, Food and Hygiene, London.



PULCHRIT

The only INVISIBLE hygienic FACE POWDER with amazingly beautifying effects.
A genuine Skin Tonic which cleanses the pores & removes all Beauty Blemishes, such as Wrinkles, Freckles, &c.

PULCHRIT IS CHARACTERISED BY THE FOLLOWING SALIENT POINTS:

1. PULCHRIT is the only Powder which produces amazing effects **after being washed off.**

2. If used as ordinary powder lightly rubbed into the dry skin, it become equally invisible.

3. The simple application of "Pulchrit" suffices to produce those healthy, restorative and **lasting effects** so desired by every woman who values her personal appearance.

4. Instead of clogging the pores it cleanses them, removing all blemishes such as wrinkles, freckles, redness, yellow skin, pimples, etc.



5. PULCHRIT imparts to the roughest skin a velvety softness, and produces that fascinating appearance, which is so much admired.

6. It produces a dazzling, beautiful skin and idealizes the complexion.

7. It is indispensable for the culture of the hand.

8. It creates a feeling of comfort and ease by neutralizing perspiration —therefore indispensable at Balls Theatres, etc.

9. It stands for health and hygiene of the skin.

10. It is an invaluable adjunct to the bath.

TERMS TO THE TRADE.

Terms to the Trade are 15 per cent. off Retail Prices. A liberal supply of Samples, Artistic Showcards and helpful advertising matter will be sent to any chemist free, on request.

PULCHRIT advertising will be carried out on a very extensive scale, including whole pages in the daily and weekly papers, and magazines. These advertisements will refer the reader to the local Chemist in every instance so that a showcard displayed in a prominent position will ensure a steady demand for the Powder and an increased high-class clientele.

PULCHRIT is put up in well-made artistic boxes, which will not readily fade or become "Shop Soiled," each box is hermitically sealed so that the contents cannot deteriorate or escape.

Pulchrit is put up in Boxes at 2/6 and 5/-, less usual trade discount.

For further information, showcards, etc., write :—

The ANTINEURASTHIN Company, 80, Botolph House, EASTCHEAP, LONDON, E.C.

Beware of spurious Imitations!

ICHTHYOL

Original Tins look as follows:



Labels and registered Trademarks:

ICHTHYOL-GESELLSCHAFT CORDES, HERMANNI & CO.
HAMBURG.

Gesetzlich geschütztes Waarenzeichen:

Ichthyol

ICHTHYOL-GESELLSCHAFT CORDES, HERMANNI & CO.
HAMBURG.

Gesetzlich geschütztes Waarenzeichen:

Sulfo Ichthyolicum

Sole makers:

Ichthyol-Company
Cordes, Hermanni & Co.
Hamburg.

D. t. o.

Ichthyol.

This special sulphur preparation, brought into commerce under the mark of „**Ichthyol**“ by the **Ichthyol Company Cordes Hermanni & Co.** in **Hamburg** has not lost its youth, as every year fresh indications for its employment are published, and by authorities of the highest rank.

For instance, **Professor Pagenstecher,** the renowned eye specialist, warmly recommends the employment of **Ichthyol** in **eczema** of an impetiginous character as well as in **ophthalmic practice.** In the secondary symptoms of the conjunctiva and cornea, so often seen in neglected children, the diseased epidermis of the head may be painted with undiluted Ichthyol, and in all eye bandages it is useful. After **operations** on the eyelashes patients are directed to close both eyes as in sleep, and the edges of the lids are then moistened with undiluted **Ichthyol,** followed by a muslin compress saturated with liquid paraffin and held in position by spectacles or a bandage. **Pagenstecher** also adopts the same procedure in **major operations,** undiluted **Ichthyol** being applied to the fresh wound after extirpation of the lachrymal gland. He calls the **Ichthyol bandage** an ideal dressing.

Again, **Professor De Renzi,** President of the Third International Tuberculosis Congress, praises **Ichthyol** as an adjunct in the treatment of **Pulmonary Tuberculosis.** Of course he is an adherent of the hygieni dietetic treatment, but also believes in the assistance of drugs. Like many other authors he has observe that **Ichthyol** diminishes the cough and reduces expectoration, whilst the patients enjoy a better appetit and consequently gain more in weight during its administration.

His prescription is:

R. Ichthyoli . . . . . 6 drs.
Elixir simplici . . . . . 5 ozs.
Aqua dest. . . . . 2 ozs.

One to three teaspoonfuls in a glass of water, once or more daily.

or. R. Ichthyoli . . . . . 2 drs.
Aqua menth pip . . . . . 2 ozs.
Syrup simpl. . . . . ½ oz.

One to three teaspoonfuls in a glass of water, once or more daily.

As much as ten teaspoonfuls can be easily tolerated daily, and must, of course, be continued for lengthy period.

The most frequent employment of **Ichthyol** at the present day is, however in various **dermatose** where an antiparasitic, reducing and Kerato-plastic action is desired; in **erysipelas,** where 20 to 50 per cen **Ichthyol**-collodion or -vaseline is almost a specific; and in **rheumatism,** where massage of the affected par with 10 to 25 per cent **Ichthyol** ointment or application of warm compresses saturated with 10 per ce **Ichthyol** solution affords much relief. Ointments containing 25 to 50 per cent **Ichthyol** have also be much prescribed in **parametric troubles** and **peritonitis;** and in **inflammatory diseases of women** tampons saturat with a mixture of **Ichthyol** and Glycerine (10 : 90) are generally used.

That **Ichthyol** in spite of the fact that its odour and taste is against it, has made its way is conclusive proof of its special therapeutic merits. The proof of success is on the other hand furnished the numerous imitations which have sprung up and try to pass for **Ichthyol.** Although such imitations ha been tried but in a few cases and are **not at all identical to Ichthyol,** they are offered by unscrupulous make and dealers as good substitutes for Ichthyol so that one of the most leading Swiss clinisions, **Professor Bour** considered it necessary, to point out in his work „**Le Traitement médical des inflammations du Coecum**“ that had **only** found **the original product of the Ichthyol Company of Hamburg effective and reliable**

For further particulars apply to the sole makers:

Ichthyol-Company
Cordes, Hermanni & Co.
Hamburg.

D. GRANT, SHOPFITTER and PATENTEE, St. James Place, EDINBURGH.



VIEW of corner of Shop . . . Fitted up for . . . Mr. KEMP DALKEITH, Shewing . . . . . Dispensing Case, Desk Case . . . . and . . . . . Counter. . . . . .



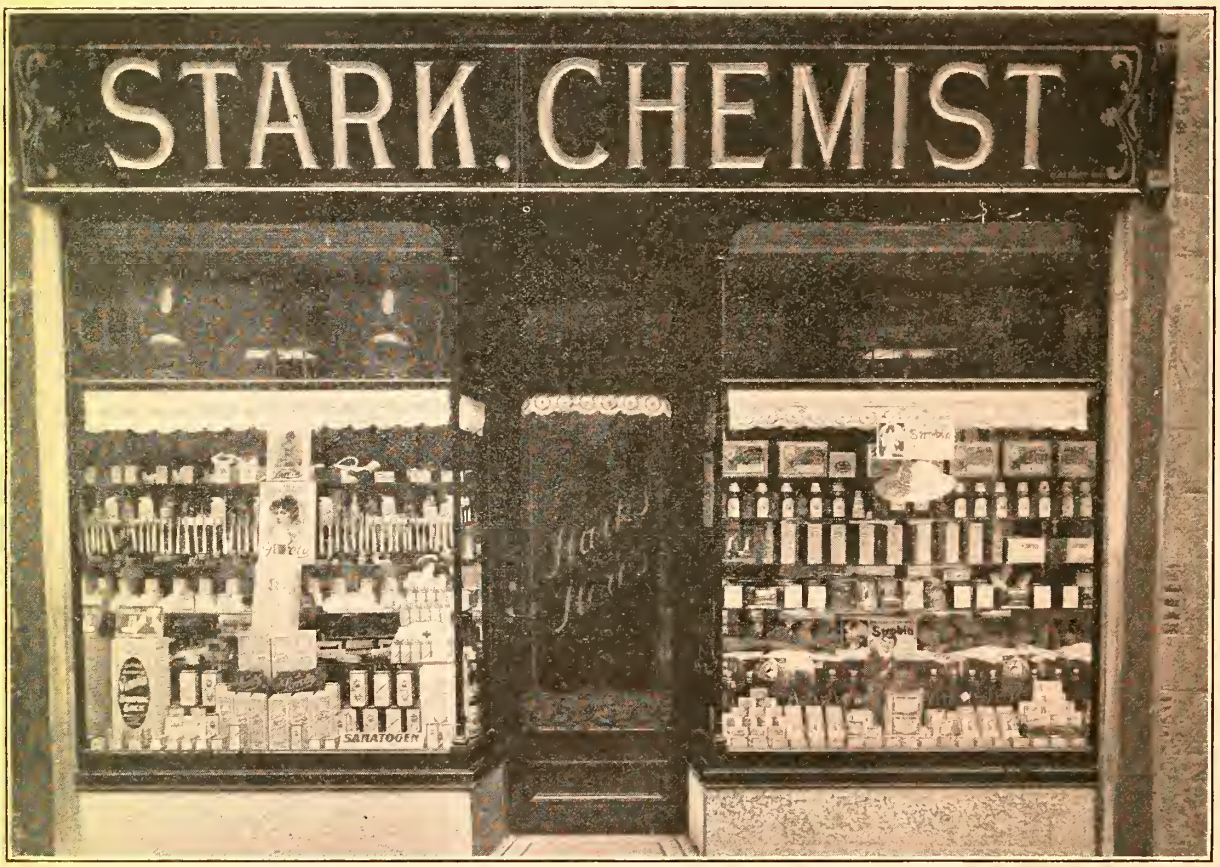
VIEW of West Side of Mr. FISHER'S Shop, Leith Street, Edinburgh, showing Piano Shaped Wall Case. . . . . .

FITTINGS made up in special style for Foreign and Colonial Trade. All fitted up in workshop in suitable sections before despatch, and easily fitted up by ordinary tradesmen. . . . . .

SPECIAL ATTENTION given to Designs and Estimates on receipt of floor plan and measurements. . . . . .

25 YEARS EXPERIENCE.

D. GRANT, SHOPFITTER & PATENTEE, St. James Place, EDINBURGH.



VIEW OF FRONT OF SHOP RECENTLY FITTED UP FOR MR. STARK, GATEHOUSE, KIRKCUDBRIGHT.

SPECIALITY—SPONGE CASE for Centre of Floor,

With Patent System of Brass Wire Sliding Trays.

DESCRIPTIVE and ILLUSTRATED PAMPHLET sent Post Free on application.
Please mention "Chemist and Druggist."

For List of Shops fitted up-to-date see ordinary issues of "Chemist and Druggist."

GOLD MEDAL, PARIS, 1900.

MORPHIA.

CODEIA.

APOMORPHIA.

MORPHIA ESTERS.

J. F. MACFARLAN & CO.

Manufacturing Chemists.

ESTD.  1780.

Wholesale Druggists.

EDINBURGH & LONDON

CHLOROFORM.

ETHER.

SALICIN.

CHRYSAROBIN.

LISTERIAN ANTISEPTIC DRESSINGS and MATERIALS.

Telegrams: "MORPHIA," EDINBURGH OR LONDON.

PETKO IV. OROZOFF & FILS, KAZANLIK. Maison Fondée 1864

Finest Virgin . Absolutely Pure

OTTO OF ROSE

Guaranteed to pass the analysis of Mr. ERNEST J. PARRY, B.Sc., F.I.C., F.C.S.

Large Stock kept in coppers of 4, 8, 16 oz. and upwards.

Sole Agents: CHAS. ZIMMERMANN & CO., 9 & 10 St. Mary-at-Hill, LONDON, E.C.

APHRODINE TABLETS

Prescribed in the treatment of IMPOTENCE and STERILITY. "Testimony in its favour is not limited to one country only; Germans, Americans, and Italians speak well of it, and its good qualities are becoming known here and in France."—VETERINARY NEWS.

Sole Agents: CHAS. ZIMMERMANN & CO., 9 & 10 ST. MARY-AT-HILL, LONDON, E.C.

LYSOL

Superior Cleansing Antiseptic and Disinfectant.

(Embossed Show Plaques, richly enamelled, free to Chemists.)

USED IN ALL THE PRINCIPAL HOSPITALS THROUGHOUT THE WORLD.

LYSOL is not a sticky coal-tar Disinfectant composed of crude carbolic acid and unrefined cresols, but an absolute cleansing antiseptic and disinfectant recognised and approved by doctors and nurses.

PARA-LYSOL ANTISEPTIC TABLETS

Put up in amber glass tubes with neat metal caps.

Sole Agents: CHAS. ZIMMERMANN & CO., 9 & 10 ST. MARY-AT-HILL, LONDON, E.C.

FLORA CHEMICAL WORKS, LTD.

DUBENDORF, ZURICH, SWITZERLAND.

MANUFACTURERS OF

Synthetic Perfumes of the Finest Quality

For Perfumery, Soaps, Toilet Preparations, &c., &c.

AMBRAINE **BERGAMOT** **HYACINTH** **JASMIN**
MUSK KETONE **MUSK AMBER** **NARCISSUS** **ROSE FLORA**
SWEET PEA FLOWERS **VIOLETS**

Samples, Price Lists, &c., of
CHAS. ZIMMERMANN & CO., 9 & 10 ST. MARY-AT-HILL, LONDON, E.C.
Sole Agents for the United Kingdom and Colonies.

Telephone:] MANAGING DIRECTOR: THOMAS TYRER, F.I.C., F.C.S. *[No. 829 East.*

GOLD



MEDAL





STIRLING CHEMICAL WORKS, ESTABLISHED 1844.

STRATFORD, LONDON, ENGLAND.

A B C Code Used, 5th Edition. Telegrams: "TYRER, STRATFORD, LONDON."

WHOLESALE and EXPORT MANUFACTURING CHEMISTS.

EXCELLENCE RELIABILITY

PURE ACIDS

SCALE PREPARATIONS

PURE BISMUTH SALTS

"Sterling" IS A TYRER'S GUARANTEE Brand

PHOSPHORIC ACID

FRUIT ESSENCES

MEDICINAL MERCURIALS Technical

PURE & METHYLATED ETHERS

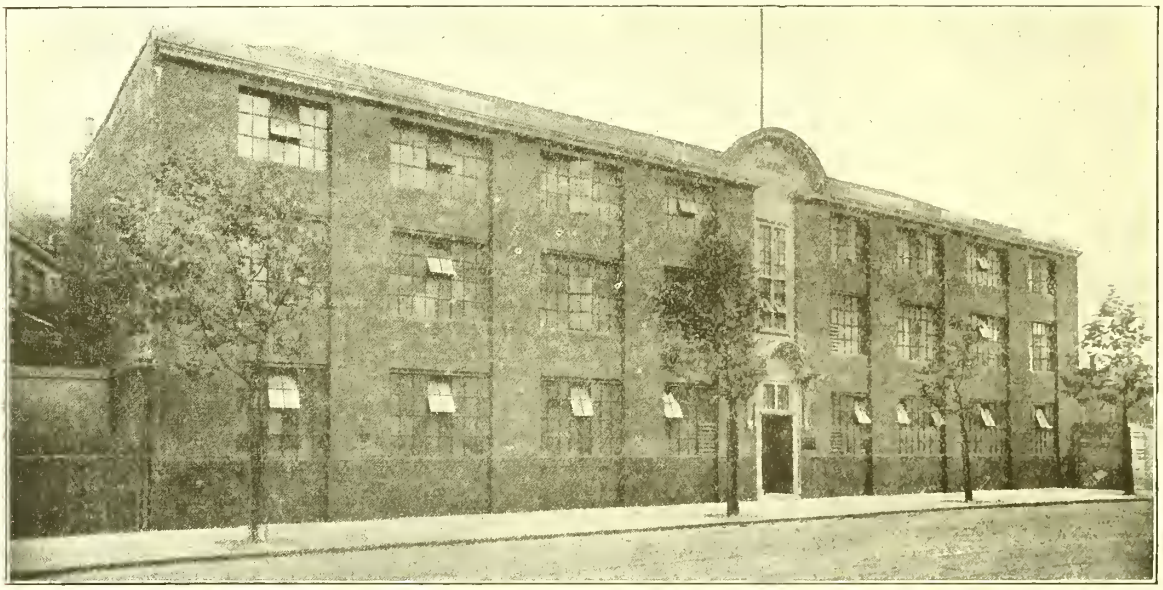
HYPOPHOSPHITES PURIF.

PURITY UNIFORMITY

Chemical Preparations, Drugs, &c., of all Descriptions.

BUYERS will oblige by specifying TYRER'S MANUFACTURE when ordering from WHOLESALE HOUSES.

ROBERT BLACKIE



Wholesale and Export Manufacturing Chemist.

Head Office, Mills and Laboratory:

SHEN WORKS, Tower Bridge Road, LONDON, S.E.

SPECIALIST.

SPUN OINTMENTS impalpable and absolutely uniform, are now the standard of quality

(Regd. Trade Mark).

And CREAMS of every kind—for HOME and EXPORT trade.

Spun Ointments are the production of Shen Works Only.

All B.P. Ointments are now spun.
Private Formulæ made up and spun.

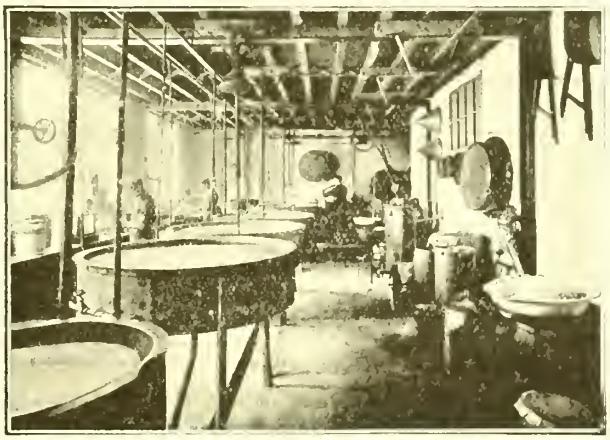
Customers' own ingredients may be supplied. Secrecy of formulæ and integrity of materials guaranteed.

SPECIAL. Cash with Order Prices may be had, goods d d London, or free on rails or steamer. Containers and packing free.

ROBERT BLACKIE,

SPECIALIST,

For Packed Goods of every description, Drugs, Chemicals, Infusions, Tinctures, Syrups, &c., &c.



OINTMENT LABORATORY.

SPECIAL.
Cash with Order Prices may be had. Goods d d London or free on rails or steamer London. Containers and packing free.

TOOTH POWDERS

For every class of Trade. The largest output in the kingdom. Over 50 Standard Grades.
In bulk or packed in tins with customers' name and address on top.

Special design for 10 gross lots and upwards.
Private Receipts carefully attended to and executed with integrity.

SHEN JAVA POWDERS.

IN FOUR SIZES.
Discount for large quantity.

BIJOU - 18/- per gross. **LARGE - 48/- per gross.**
SMALL - 33/- ,, **JUMBO - 88/- ,, ,,**

Various Labels: Customers' name and trade-mark worked in where required.

Java Leaf Booklets, 2 dozen in glass top box, **24/- per gross.**

LIME CREAMS in all sizes.

With various labels and varied finish. A homogeneous Pure White Cream, which keeps indefinitely and will not go thick or separate.

PRICES.

3 oz.	4 oz.	6 oz.	8 oz. White French Limes.
21/- to **24/-**	**24/-** to **30/-**	**30/-** to **36/-**	**4)/-** to **48/-** per gross.

B.P. SYRUPS, Concentrated.

These Liquors are turned out the correct specific gravity for making absolute B.P. S rups.
(Your enquiry will be esteemed).

Chemical Food **Malt Extract and Cod Liver Oil**
Cod Liver Oil Emulsion **Hair Dyes**
Malt Extract **Citrate of Magnesia**
Toilet Powders **Effervescing Saline** **Hazel Foam**

TINCTURES, ESSENCES, &c., &c., PACKED IN BOND FOR EXPORT.

General Price List on Application.

CORRESPONDENCE CORDIALLY INVITED.

A Unique Food Product

HITHERTO UNOBTAINABLE.

It will be recalled that, in *The Chemist and Druggist* of January 30, 1909, we published, for the first time, details of the scientific opinion of Mr. E. F. Harrison, B.Sc.(Lond.), Ph.C., F.I.C., F.C.S., regarding the value of **DiaMalt.**

Mr. Harrison compared DiaMalt with various brands of extract of malt on the market, and found DiaMalt to be of a much higher diastasic power than any other Malt Extract. **DiaMalt completely digested practically fourteen times its own weight of starch in half an hour.**

That analytical testimony has been amply endorsed by the unqualified approval of medical men, pharmacists and the public generally, and we have now produced a **DiaMalt and Oil** which is unique.

This preparation is of two strengths (one of 33⅓% by weight), and consists solely of **DiaMalt and Cod Liver Oil without artificial flavouring of any kind,** or any emulsifying vehicle. It is **DiaMalt and Oil**—no more and no less.

The high diastasic and nutrient properties of this unique product brings good results to physicians, satisfaction to patients, and credit and profit to those who sell it. Please examine carefully the analytical figures on the opposite page.

Sold on P.A.T.A. rules. Write for samples and prices.

The British DiaMalt Co

Maltsters & Malt Extract Refiners.

DIAMALT and OIL

From E. F. HARRISON, B.Sc. (Lond.), Ph.C., F.I.C., F.C.S.
Analyst, Assayer, and Consulting Chemist.

55 Chancery Lane,
London, W.C.
July 19th, 1909.

Messrs. THE BRITISH DIAMALT CO., 11 and 13 Southwark Street, S.E.

Gentlemen,

At your request I have analysed the two samples of "DiaMalt with Cod Liver Oil" which you have submitted to me, labelled respectively "15 per cent." and "33⅓ per cent." I have also obtained specimens of a considerable number of other makes now in the market, including all the principal brands, and have submitted them to a similar examination. This has included determinations of the percentage of oil present in each, and of the diastasic strength of the malt extract with which it is mixed. The results which I have obtained are given in the following figures :—

SAMPLE **DiaMalt**	Percentage (by weight) of oil present.	Diastasic value of Extract.
No. 1 33⅓%	33·8	680
,, 2 15%	15·5	776
Other makes		
No. 3	17·4	5
,, 4	3·6	87
,, 5	22·3	413
,, 6	4·7	335
,, 7	14·7	29
,, 8	30·5	129
,, 9	3·8	172
,, 10	6·2	31
,, 11	2·1	104
,, 12	5·7	10
,, 13	10·1	17
,, 14	6·8	43
,, 15	5·7	150
,, 16	7·5	50
,, 17	10·3	15
,, 18	8·6	21
,, 19	1·5	9

I have also examined the samples of "DiaMalt with Cod Liver Oil" for the presence of foreign substances used as flavouring agents, but I have found no evidence of any such substance.

I am, gentlemen, yours faithfully,
(Signed) E. F. HARRISON.

11 & 13 Southwark Street, London, S.E.

And SAWBRIDGEWORTH (Herts.).

LORIMER & Co.

LIMITED,

LONDON.

'Phone: No. 524 North. *Cables: "CALISAYIN LONDON."*

H. BROCKLESBY, Sole Managing Director.

Analytical and Manufacturing Chemists, Wholesale and Export Druggists, Manufacturers and Exporters of all Pharmaceuticals, Flavouring Essences, Toilet Requisites, Veterinary Medicines, Compressed Pellets, Infants' Foods, Granular Effervescing Preparations, &c., &c.

PIONEERS IN 1870 OF CHEMISTS' OWN NAME SPECIALITIES.

A selection from a few Customers' Opinions, bona-fide and open to inspection.

FROM A LONDON CHEMIST: "I should like to let you know how pleased I have been with the various products of your firm sold by me during the year. One doctor in this district is continually sending patients for the Emulsion. I am hoping in the future to do considerably more with you."

FROM A CHEMIST IN SCOTLAND: "I am immensely pleased with the Specialities I had from you. In price, get-up, and quality your goods are A1."

A CHEMIST, BALLYMENA, IRELAND says: "Your Chemists' Own Name Specialities are the best I have seen."

FROM A CHEMIST IN THE MIDLANDS: "With your goods we can beat Boots' and the Stores."

FROM A CHEMIST, LONDON, S.W.: "Since stocking your Specialities we can hold our own against any Company. The lines you have got up for us have been distinctly successful."

A TRANSVAAL CHEMIST writes: ". . . Messrs. —— & Co.'s traveller is here, and finds to his annoyance your goods all over the place. However, I can honestly assure you that ten times more of yours than of their goods can be sold."

FROM THE COLOMBO PHARMACY, CEYLON: "Your Eczema Cream is doing wonders here, replacing all other specifics. I got three gross of it through —— in July last, and am nearly out. Am just sending you another order.

A CHEMIST, SHREWSBURY, says: "Your Specialities are undoubtedly the best in the World."

YOUR INQUIRIES WILL BE ESTEEMED. ***QUALITY IS OUR SLOGAN.***

25% Protected Profit

Prices of Iron-Ox Tablets to the Trade.

One Shilling size Under 6 dozen **10/-** per dozen net. Cash with order.
6 dozen **9/9** per doz. net in 30 days, or **9/6** cash in 10 days.
12 ,, **9/3** do. do. or **9/-** do. do.

Four Shilling size Under 1½ dozen **40/-** per dozen net. Cash with order.
1½ dozen **39/-** per doz. net in 30 days, or **38/-** cash in 10 days.
3 ,, **37/-** do. do. or **36/-** do. do.

Mixed Orders The above terms for 6 dozen **1/-** size, or 1½ dozen **4/-** size will be given on mixed orders value **£3.** And our very best terms on mixed orders value **£6.**

Retail Price P.A.T.A. PROTECTED **1/-** and **4/-** face value. Carriage paid on all goods.

Attractive Show Cards, Window Slips, &c., Free on Application.

IRON-OX

TABLETS.

To be obtained from all the principal Wholesale Houses or direct from THE IRON-OX REMEDY CO., Ltd., 20 Cockspur Street, Trafalgar Square, London, S.W.

COX'S NEW LINES

COX'S LACTIC TABLETS FOR THE MANUFACTURE OF "HEALTH MILK."

The exorbitant charges of several makers of the Lactic Acid bacilli tablets, and their endeavour to *name* their brand and thus add to the already enormous list of *proprietary* medicines, has compelled us to offer to the chemist a reliable Lactic Acid bacilli tablet of guaranteed activity at reasonable prices:

Per dozen boxes of **50** **18/-** Retailing at **2 6** each.

CHEMIST'S OWN NAME ON ONE DOZEN.

Well packed. Elegant Finish. Selection of Styles.

Indicated in the treatment of Acidity, Constipation, Colitis, Corrective, Diabetes, Diarrhœa, Dysentery, Enteric Fever, Enterocolitis, Flatulence, Gastro-Enteritis, Indigestion, and Intestinal Tuberculosis.



INSTRUCTIONS FOR MAKING HEALTH MILK.

Boil a pint of New Milk, cool to blood heat, skim, add three or four Tablets previously crushed, put into three tumblers as shown in illustration, or, if preferred, into a basin, place in top of apparatus with warm water, leave for ten hours with night light burning. Then pour off whey and leave until morning. Eat the curds with castor sugar, preferably before breakfast. Never use the curds after the first day.

24/- Per Doz. Wholesale.

MARIENBAD ANTI-OBESITY TABLETS.

These Tablets contain

Sal. Marienbadens, Extr. Rhei, Extr. Aloes, Extr. Cascaræ Sagrad.,

and have been proved to be very efficacious, yet quite harmless.

SILVER COATED. ELEGANTLY PACKED.

PER **6/6** DOZ.

TAMARIND PELLETS.

:: For ::

Constipation & Disorder in the Stomach and Intestines.



Quite a Sweetmeat. Taken Readily by Children.

A pleasant non-irritating and efficacious laxative for the treatment of habitual constipation.

6 Pellets wrapped in tinfoil in box, labelled with Chemist's Name and Address.

PER **4/6** DOZ.

ARTHUR H. COX & Co., Ltd.

THE ORIGINAL MAKERS OF TASTELESS PILLS.

Telegraphic Address: "COX BRIGHTON."
Telephones: Nat. 5895; P.O. 895.

BRIGHTON, Eng.

100,000 PHYSICIANS PRESCRIBE

RESINOL.

A perfect ointment that is thoroughly efficient as an Antipruritic, Local Antiphlogistic and Skin Nutrient. Invaluable for Eczema, Erysipelas, Pruritus, and all Itching Skin Diseases. The only positive remedy for Pruritus Ani known.

RESINOL SOAP

The best Soap for the Skin, Hair, Scalp, &c.
Removes Chemical odours from hands.
Is a superior Shaving Soap.
Soothing and Healing to sensitive surfaces.

RESINOL CHEMICAL CO.

BALTIMORE, MARYLAND, U.S.A.
97 NEW OXFORD ST., LONDON, ENG.
Australasian Agents: CHARLES MARKELL & CO., O'Connell St., SYDNEY.

Cooling & Refreshing Drinks
FOR HOT WEATHER.

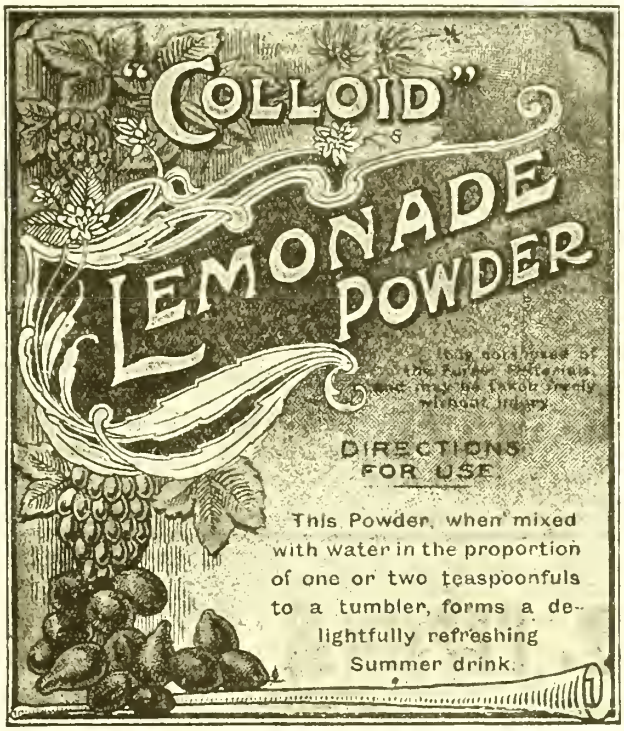
SULPHUR SALINE GRAINS.

(Brimstone and Treacle Up-to-date.)

This is a very elegant preparation for the administration of Sulphur. It forms a beautiful milky solution, and is very refreshing.

Price: 5/6 per dozen.
64/- per gross.

Attractive Showcard with 3 dozen.



CARLSBAD SALINE.

(The Natural Water in the Home.)

Produced from analysis of the Carlsbad Spring Water, which is well known for its cooling and mild aperient properties.

In 8-oz. stoppered direct Squares, each in Carton.

Price: 7/6 per dozen.
84/- per gross.

In 6-oz. White Flats, Patent Stoppers, 4/- per doz.; 46/- per gross.
In 1-lb. Bottles, Corked, 8/6 per doz.; 100/- per gross.
The 1-lb. bottles have an elegant lithographed label in colours.

☛ THIS IS A SPLENDID LINE FOR SALE. ☚



CITRATE OF MAGNESIA

If you have not tried our make send for sample of ***A*** *quality.*

— THERE IS NOTHING BETTER ON THE MARKET!! —

Fruit Saline or Health Salt

Put up in a great variety of styles.

"T. Howard Lloyd & Co.'s Granular Effervescent Preparations show that they are maintaining their standard, the granules being uniform and well made."—CHEMIST AND DRUGGIST.
"After submitting your Granular Effervescing Preparations to careful examination, we are able to speak confidently of their merits."—BRITISH AND COLONIAL DRUGGIST.
"The Health Salt is the best I ever had."—M.P.S.

SAMPLES AND LISTS OF PRICES ON APPLICATION.

T. HOWARD LLOYD & CO.,

St. James' Street, LEICESTER.

THE HULL OIL MANUFACTURING CO.

HULL, ENGLAND. LIMITED.

PURITY GUARANTEED.

REGISTERED HOMCO TRADE MARK.

PIONEERS OF THE **CASTOR OIL** INDUSTRY IN ENGLAND

MEDICINAL, FIRSTS and SECONDS.

Our MEDICINAL OIL is specially recommended. Being a Pure Sweet Natural Oil, it is practically Tasteless.

NO ARTIFICIAL BLEACHING; THEREFORE NO RANCIDITY.

CASTOR OILS TO BLEND WITH MINERAL OILS.

ALSO MANUFACTURERS OF—

SOYA OIL. RAPE OILS. SOFT SOAPS.

Telephone Nos.—4212, 4213, 4214 NATIONAL. 42 CORPORATION.

Telegraphic Address— "HOMCO HULL."



GOLD MEDAL, Cape Town International Exhibition, 1904–5.

"MIST. PEPSINÆ CO. c. BISMUTHO."

(HEWLETT'S).

THE ORIGINAL PREPARATION.

Many pharmacists have assured us that even when the name "**HEWLETT'S**" is not appended to the above title they invariably dispense HEWLETT'S preparation, as they know from experience that it is the best, that it keeps indefinitely, and universally gives satisfaction, whilst imitation preparations vary so considerably, not only from the **original**, but from each other, that patients notice the difference and complain.

Price **11s.** per lb., packed, for dispensing only, in 10, 22, 40, and 90 oz. Bottles.

INTRODUCED AND PREPARED ONLY BY

C. J. HEWLETT & SON, Ltd., Wholesale Druggists, 35 to 42 Charlotte St., **LONDON, E.C.**

ON THE P.A.T.A. LIST.

A handsome Profit assured.

Mrs. WINSLOW'S SOOTHING SYRUP

FOR CHILDREN TEETHING.

Cards and Bills free on application, from

THE ANGLO-AMERICAN DRUG CO., LIM., *33 FARRINGDON ROAD,* **LONDON.**

SALEABLE SPECIALITIES

COMPRESSED TABLETS — Customer's own name and address. Complete list on application.

DRY FILLED CAPSULES — Best mode of administering Acetanilide, Antipyrin, Algiron, Bismuth, Phenacetin, Quinine, etc., when rapid action desired. Complete list on application.

MEMBROIDS — Best mode of administering Drugs when slow action is desired, not dissolving till intestine reached. Complete list on application.

COATED PILLS — Pearl, Gelatine, or Sugar coated. 554 varieties. Complete list on application.

FLEXIBLE GELATINE CAPSULES — All descriptions, loose and in boxes with customer's name and address. Complete list on application.

SAVARESSE CAPSULES — Acknowledged the best and most suitable for nauseous medicines. Complete list on application.

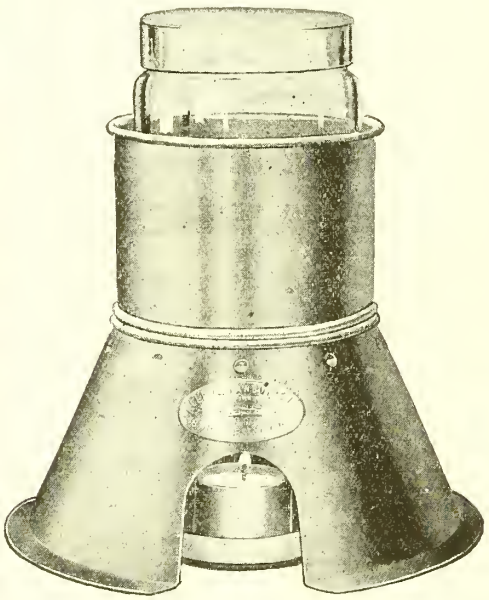
EVANS' ANTISEPTIC PASTILLES — Original and best. Very largely advertised. Price protected and good profit. Particulars on application.

EVANS SONS LESCHER & WEBB, LTD.
LIVERPOOL and LONDON.

"SAUERIN"

(TRADE MARK).

A culture of vigorous strains of *Bacillus acidi lactici*, prepared in tablet form for internal use and for the production of **"Soured"** or **"Curdled" Milk.**



"SAUERIN" APPARATUS
for the production of
"Soured" or "Curdled" Milk.

THE use of "Soured" or "Curdled" Milk is indicated in auto-intoxications associated with intestinal atony or obstruction, chronic dyspepsia, etc.

It is used especially in colitis, enteritis, and infantile diarrhœa.

The lactic acid in "Soured" Milk stimulates the pancreatic and biliary functions, and a very mild laxative effect is usually observed. "Sauerin" is therefore employed as a cholagogue in hepatic congestion, gall-stone, and as a disinfectant and stimulant to the intestinal tract.

"Sauerin" Tablets.

These are put up in bottles of 50 and 100 tablets.
Retail **2/6** and **4/6** each. Wholesale **24/-** and **42/-** per doz.

The "Sauerin" Apparatus of polished copper, with glass-covered Jar and one dozen Lights:

			Retail	Wholesale
"Sauerin" Apparatus,	1-pint size,	complete	**8/6** each,	**88/-** per doz.
,, ,,	6-pint ,,	,,	**21/-** ,,	**17/6** each.
,, Lights,	1-pint ,,	per box	**10d.** ,,	**8/-** per doz.
,, ,,	6-pint ,,	,,	**3/6** ,,	**35/-** ,,
,, Spare Jars,	1-pint ,,	,,	**1/-** ,,	**10/-** ,,
,, ,,	6-pint ,,	,,	**3/6** ,,	**35/-** ,,

Extracts from the Medical Press, &c.

Intestinal Intoxications. "Metchnikoff has suggested another way of attacking this difficult problem. Instead of attempting to render the bowel aseptic, he advises the introduction of other organisms which are antagonistic to the growth of the putrefactive bacteria. These are the lactic acid producing organisms. 'Soured' milk has long been a staple article of diet among Oriental people, and enjoys a high repute as a hygienic measure. . . ."

"Bulgarian 'yahourth,' or 'yoghourt,' is milk soured by the most powerful lactic acid producing bacillus known. Unfortunately, the commercial product in use contains a diplococcus and a strepto-bacillus also. However, preparations of selected lactic ferments are now on the English market; but some of these preparations, tested at St. Bartholomew's Hospital, have been found quite inert. Allen & Hanburys' 'SAUERIN' was the most active preparation of those tested. One or two tablets are taken three or four times daily after meals, which should include some sugary substance, or the tablets may be used to curdle milk, which is taken in that form."—***The Medical Press and Circular,*** July 22, 1908.

Report on "Sauerin" Tablets by an eminent Bacteriologist of one of the chief London Hospitals, June 2, 1909: "The tablets break up easily and show numerous bacilli in film preparations of the powder. They rapidly acidify and clot milk, and give an abundant and pure growth of the Metchnikoff bacillus . . . These tablets I consider to be the most satisfactory which I have yet examined."

Fermented Milk (H.S.F.—50/44). "What you require for this purpose is a pure culture of a vigorous strain of *Bacillus acidi lactici*, which may readily be obtained commercially in various forms, the best being 'SAUERIN' in tablets, which may be obtained from Messrs. Allen & Hanburys Ltd."—***Pharmaceutical Journal,*** January 23, 1909.

ALLEN & HANBURYS LTD.

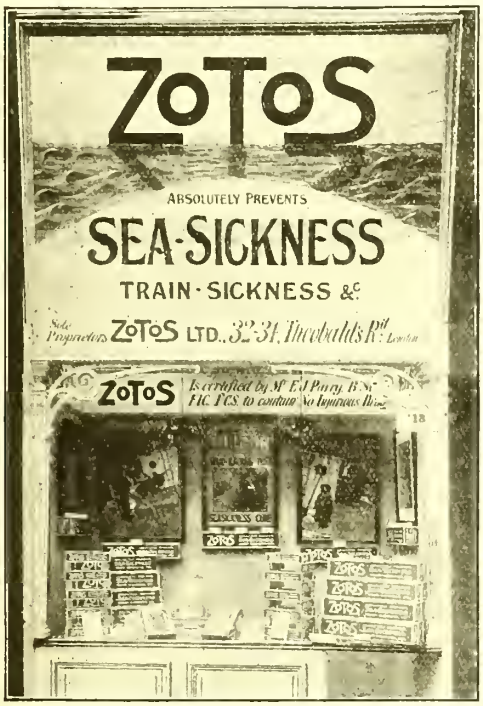
LONDON.

Surgical Instruments—48 Wigmore Street, W. *West End House*—7 Vere Street, Cavendish Sq., W.

A POPULAR REMEDY

ZOTOS

A harmless and sure remedy against Sea-Sickness, Train-Sickness. etc.



A view of our Stand at the recent Chemists' Exhibition.

Extract from the "Fishing Gazette" of 12 6 09.

A Real and Good Remedy for Sea-Sickness— A Boon to Sea-Anglers.

In the course of a private letter to me, a keen sea angler, Mr. John Pogmore, said he was greatly indebted to the *Fishing Gazette* because it had made known to him "Zotos," a new remedy for sea-sickness. I said I was extremely glad to hear of anything that was a real and harmless remedy, and asked if he would mind giving his experience in the *Fishing Gazette*. He writes :—

> "Dear Sir,—Many thanks for yours of June 1 enclosing the address for which I asked. You ask for details about 'Zotos,' and I gladly supply them. I saw a letter in the *Fishing Gazette* recommending it about Easter time, and determined to try it. I procured a box at Gamage's, and gave it a trial early in May at Newhaven. It was a rough day with half a gale blowing from the south-west, and I fished to *windward* of the breakwater right in the wash. It was so rough that we had to do as much bailing as fishing at times. In spite of this I had no qualms of sickness at all; *it was the first day's ground-fishing I have ever had without being ill*, and I have been at it fifteen years off and on. The stuff is put up in capsules, and one has to be taken an hour before going afloat, and others at intervals if required. I found two to be quite sufficient in my case. Plenty of other remedies are effective, if one can lie down and go to sleep, otherwise they produce nauseating after-effects. I found no unpleasant effects after taking 'Zotos,' but it made me desperately hungry."

The above is only one of many unsolicited testimonials in our possession.

"Zotos" is certified to contain no injurious drug by Mr. Ernest J. Parry, B.Sc., F.I.C., F.C.S., can be recommended with real confidence, is on the P.A.T.A. list, and shows a good profit to the Trade.

It is a line *worth pushing.*

Remember.

All travellers call at their Chemists' for supplies before going on a journey, and every traveller should be made aware of the virtues of Zotos.

ZOTOS LTD., 32 & 34 Theobald's Road, London, W.C.

Telephone : City 1348. Tel. Add. "Zotosette."

PRECIPITATED CRETA PRÆCIP.

The Well-Known STURGEON BRAND REG^{D} TRADE MARK "Sturge's Chalk."

CHALK.

All grades from the **FINEST LIGHT** to **VERY DENSE.**

MANUFACTURED BY

JOHN & E. STURGE, 18 Wheeleys Lane, **Birmingham.**

Agents:

THE NATIONAL ANILINE & CHEMICAL CO., 100 William St., NEW YORK.

ALPHONSE RUCH, 63 Rue des Archives, PARIS.

Aiso Manufacturers of—

CITRIC ACID, BICARBONATE OF POTASH, ROCHELLE SALTS and pulv. SEIDLITZ, FLUID MAGNESIA, and "CITRATE OF MAGNESIA," and other Effervescent Saline Preparations.

Telegrams "Sturgeon, Birmingham."

THE LIVING ORGANISM

From Vigorous Culture of Bacillus Acidi Lactici in Living State.

COMPRESSED TABLETS

LACTIC TABLETS.

FOR THE MANUFACTURE OF CURDLED MILK.

Name Space.

ACCURATE + + PORTABLE + + TASTELESS

50's AT 18/- per doz.

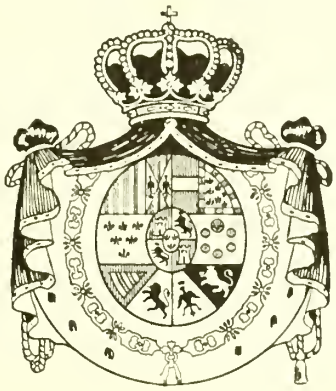
Please ask for Quotations in Bulk Quantities

The same standard of exeellenee maintained as when our products were noticed by THE CHEMIST AND DRUGGIST of Sept. 9th, 1899: "The Resins (Podophyllin and Scammony) are also manufactured by the firm, as they use large quantities of them in their pill faetory. **We have tested both and find them to be pure,** the Podophyllum Resin being quite free from earthy components, which are sometimes added to faeilitate preeipitation, and whieh result in partial produets."

Davies, Lovis & Co

Manufacturing Chemists, THE BRIDGE ST., DERBY. ENG.

BY APPOINTMENT TO



THEIR MAJESTIES
THE KING AND QUEEN OF SPAIN.

Gentlemen,

We present our compliments and have pleasure in informing you that we have been honoured by the favour of the Royal Warrant of Appointment to their Majesties the King and Queen of Spain.

The fact that this Appointment will be made widely known, coupled with the fact that the Public are satisfied with the merits of our well-known and largely advertised "Lung Tonic," presages a good season for all concerned.

"OWBRIDGE'S LUNG TONIC"
is fully protected

and, when sold at the minimum price, shows a profit of 20% to 25%. We shall be pleased to send a Price List to any enquirer enclosing Trade Card.

Yours faithfully,
W. T. OWBRIDGE, LTD.
The Laboratory,
HULL.

LARGELY INCREASED PRODUCTION & SALE.
SPECIAL TERMS TO LARGE SHIPPERS.

PRECIPITATED CHALK

CRETA PRÆCIPITATA (Calc. Carb. Præcip. Leviss.)

SPECIAL QUALITY.



FINEST, LIGHTEST, AND PUREST IN THE MARKET.

Every particle is passed through a mesh of **40,000** to the square inch.

NICHOLS CHEMICAL CO., Ltd., .. Baxenden, .. Nr. ACCRINGTON.

CERTIFICATE OF ANALYSIS from

VIRGIL COBLENTZ, A.M., Ph.G., Ph.D., F.C.S.,

Professor of Theory and Practice of Pharmacy.
Director of the Pharmaceutical Laboratory, New York College of Pharmacy.

The sample of Precipitated Chalk, **G. W. N.** Brand, which was submitted for my examination, I found to fulfil all the requirements of the United States Pharmacopœia as regards tests of purity. *The sample is remarkably* pure and free from the usual impurities found in Precipitated Chalk.

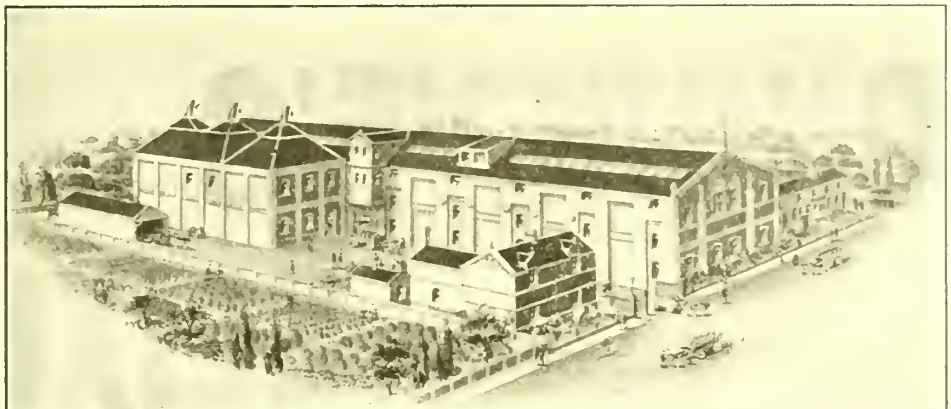
Signed, V. COBLENTZ, *Ph.D.*

"The purity of this Chalk is still maintained, and a feature of considerable interest to "Pharmacists who pack their own dentifrices is the exceptional lightness of the article. Two "ounces of the G. W. N. Brand occupy the space required for three ounces of the denser kinds "in the market."—CHEMIST & DRUGGIST.

London Agents: **BAISS BROS. & STEVENSON, Ltd., 4 Jewry St., E.C.**

Paris Agent: ***S. A. ETTINGHAUSEN, 54 Rue de la Tour 16e.***
New York Agents: ***PARKE, DAVIS & CO., 90, 92, & 94 Maiden Lane.***

SAL AMMONIAC. . . . . Apply Direct.



MALTINGS

"Paco" Diastasic Malt Extract.

GUARANTEED DIASTASIC STRENGTH 100° LINTNER (MINIMUM.)

A PROMINENT LONDON ANALYST writes:

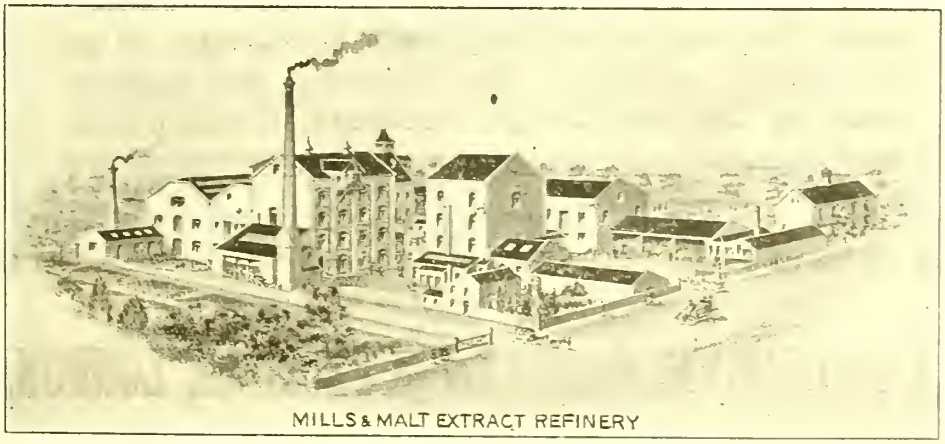
"I beg to inform you that I have tested the sample of Malt Extract received from you this morning, and I find that it shows a diastasic power of **2048** in the units of the 'Codex' test, or of 158 degrees of Lintner's scale."

WHOLESALE & EXPORT ENQUIRIES SPECIALLY INVITED.

Write for prices, giving full particulars of requirements

PAINE & CO., LTD.

St. Neots, Huntingdonshire, England.



MILLS & MALT EXTRACT REFINERY

CONGREVE'S

BALSAMIC ELIXIR

In Use for 80 Years.

IS

THE OLDEST, MOST RELIABLE AND BEST REMEDY

FOR

CONSUMPTION,

ALSO FOR

Asthma,

Bronchitis, Coughs, Colds,

AND ALL AFFECTIONS OF THE LUNGS.

1/1½, 2/9, 4/6 and 11/- bottles.

Mr. Congreve's well-known new book on Consumption and other Diseases of the Lungs will be forwarded, post free, for Sixpence, on application to Coombe Lodge, Peckham, London, S.E.

COUNTER BILLS, ***with Chemist's name and address printed thereon, will be sent carriage paid on application to the proprietor,***

G. T. CONGREVE, Coombe Lodge, PECKHAM, LONDON, S.E.

NOTHING BETTER

THAN THE BEST.

Of all Products in the Drug World, the buying of which is important, most Pharmacists will agree that . . . . .

Emulsion of Cod Liver Oil

is the one. We claim that we have so far perfected our EMULSION that IT STANDS PRE-EMINENT for high-class quality, elegance in appearance, for keeping in a saleable condition, and giving satisfaction to Pharmacists in all climates.

In addition to the **Chemist's Emulsion,** we have now placed upon the market a number of new original and high-class designs suitable for those Pharmacists who desire a first-class emulsion to sell under their OWN NAME.

EXCLUSIVE STYLES arranged to meet individual requirements as follows:

FISHERMAN BRAND Carton, in panel Bottles.
"TWIN FISH" „ „ } 6 oz., { Leather Capped Oval Bottles.
"LEAPING FISH" „ „ } 12 oz. & 24 oz. { „ „ „ „
"BABY BRAND" Carton, in White Glass Panelled Bottles.

SAMPLES AND QUOTATIONS ON APPLICATION TO

WOOLLEY'S, Ltd.

Emulsion Specialists, BLACKBURN

P.S.—We have appointed as Sole London Wholesale Agents Messrs. Sangers, 258 Euston Road, London, N.W., who hold stocks of all the various styles and will print customers' names, &c., on labels and cartons by arrangement. We trust our London clients will find our new arrangement a great convenience.

By Weight or Count.

POPULAR PRICES.

Pil. Aloes et Ferri, gr. iv., Ol. Pulegii, m ½ **2d.** per gross, or **1/6** lb.

Pil. Antibilious, Pil. Hydrarg., Pil. Rhei Co., aa. gr. ij. ss. ... ... **4d.** per gross, or **2/3** lb.

Pil. Aperient (Ext. Aloes Aquos. ʒ j., Pulv. Cambog. gr. iv., Pulv. Jalapæ, gr. viij.; Pulv. Colocynth, gr. vj.; Pulv. Hyd. Subchlor., gr. iv.; Sapo Hyspan. gr. iv.; Gingerin. gr. iv.; Ft. Pil. xij.) **2½d.** per gross, or **1/6** lb.

Pil. Aperient (Little) (Aloin, Jalapin, aa. gr. 1-10; Podophyllin gr. 1-5; Ext. Hyoscy., Ext. Nucis Vom., Capsicin, aa. gr. 1-20) **2d.** per gross, or **7/9** lb.

Pil. Back and Kidney (Oval) Gelatine-coated (Ext. Buchu, Ext. Uvæ Ursi, Pulv. Capsici, aa. gr. ¼; Ol. Juniper., m ¼; Pulv. Pot. Nit., gr. j.; Podophyllin, gr. ⅛; Tereb. Venet., gr. ½) **7d.** per gross, or **7/9** lb.
Pearl-coated ... ... **5d.** per gross, or **4/3** lb.

Pil. Castor Oil (Ol. Ricini, gr. ½; Pot. Sulph., gr. 1½; Pulv. Rhei, gr. ij; Sapo Hyspan., gr. ½; Ol. Crotonis, gr. 1-16 **2d.** per gross. or **1/6** lb.

Pil. Coloc. Co., B.P. ... ... **5½d.** per gross, or **3/8** lb.

Pil. Coloc. et Hyoscy., B.P. ... ... **5½d.** per gross, or **3/8** lb.

Pil. Dandelion and Camomile (Ext. Taraxaci, Ext. Anthem., Pulv. Rhei, aa. gr. j.; Pulv. Zingib., Pulv. Aloes Barb., aa. gr. ½; Ol. Carui, gr. ¼) ... ... **2½d.** per gross. or **1/8** lb.

Pil. Ferri Co., B.P. ... ... **9/6** per 100 gross, or **7d.** lb.

Pil. Gout and Rheumatic (Ext. Colchici Acet., gr. ss.; Pil. Hydrarg., Pil. Rhei Co., Ext. Hyoscy., aa. gr. j.) **7d.** per gross, or **4/3** lb.

Pil. Ipecac. et Scillæ, B.P. ... . **3d.** per gross, or **1/8** lb.

Pil. Neuralgic (Quineti, Ferri Sulph., aa. gr. ½; Ext. Bellad., gr. ¼; Ext. Colchici Acet., gr. ½; Hyoscy., Camphoræ, aa. gr. j.) **8d.** per gross, or **4/9** lb.

Pil Podophyllin (Podophyllin gr. ¼; Ext. Coloc. Co., gr. ½; Pulv. Aloes Socot., gr. j.; Pulv. Scammon., gr. ½; Sapo Hyspan., Ext. Hyoscy., Gingerine, aa. gr. ½) **5d.** per gross, or **4/6** lb.

Pil. Quinine, gr. j. ... ... **5d.** per gross, or **8/3** lb.

Pil. Quinine, gr. ij. ... ... **8½d.** per gross, or **9/6** lb.

Pil. Rhei Co., B.P. ... ... **2d.** per gross, or **1/5** lb.

Stomach and Liver Beans (Oval) Gelatine-coated, same Formula as Pil. Aper., but with 1 gr. Calomel in each Bean **5d.** per gross, or **8/3** lb.

Minimum quantity, 5 × 10 gross or 5 × 1 lb. tins, which may be assorted, with the exception of Pil. Ferri, B.P., Minimum 100 gross, or 7 lb. All Pills Pearl-coated unless otherwise indicated. No extra for coloured coatings.

COMPRESSED TABLETS.

	25 Per doz.	100 Per doz.	Per 1000	Per lb.
Acid Aceto-Salicylic, gr. 5	2/-	6/9	3/4	4/8
Antipyrin, gr. 5	3/2	9/-	5/9	8/-
Bismuth, Pepsin, and Charcoal ...	3/2	9/-	6/8	9/3
Bismuth and Soda	3/3	9/-	5/9	8/-
Blaud's, gr. 4, sugar or chocolate coated	1/9	4/-	2/-	2/4
,, gr. 4, c. Aloin, gr. 1-20, sugar or chocolate coated	1/9	4/-	2/-	2/4
,, gr. 4, c. Arsenic, gr. 1-50, sugar or chocolate coated	1/9	4/-	2/-	2/4
Cascara Ext., gr. 2, sugar or chocolate coated	1/1	3/-	1/8	2/4
Chlorate of Potash	1/3	2/3	-/7	-/8
			7 lb. @	-/7
,, **and Borax** ...	1/3	2/3	-/7	-/8
			7 lb. @	-/7
,, ,, **and Cocaine**	1/8	3/6	1/8	2/3
Damiana Co., sugar coated pink... ...	3/-	9/-	5/9	5/3
Hypophosphites, Syrup = 1 dr., sugar coated	2/-	9/-	5/9	6/8
Pepsin, gr. 2, sugar coated	2/9	8/-	5/-	7/-
Phenacetin, gr. 5	1/8	5/6	2/8	3/8
,, gr. 4, Caffein Cit. gr. 1, white or pink	1/10	6/9	3/8	4/6
Quinine, gr. 2, sugar coated	2/8	7/-	5/-	7/-
Rhubarb, Soda, and Ginger	1/8	3/9	1/4	1/10
Saccharin, gr. ½,—200's, 6/3; 500's, 13/- doz. ...		3/7	2/2	13/6
Soda Mints—30's, 1/2		2/8	-/6	-/8
			7 lb. @	-/7
Sulphonal, gr. 5	4/-	12/-	7/3	10/6
Sulphur Co. (Garrod)	1/3	3/-	1/2	1/8
Vegetable Laxative...	2/-	7/-	3/-	4/3

FLEXIBLE GELATINE CAPSULES.

	Per dozen Boxes of 12	24	30	36	Per 100	Per 1000
Apiol, m 3	3/9	6/9	7/9	9/-	1/9	16/-
Apiol, Aloes, and Iron ...	2/3	3/-	4/9	5/-	-/10	7/3
Apiol, Pennyroyal, and Borax	4/3	7/3	8/6	9/3	2/-	17/6
Blaud—1 Pill	2/-	2/9	4/-	4/6	-/8	5/9
,, —2 Pill	2/6	3/-	4/6	5/-	-/10	6/6
,, —3 Pill	2/9	3/3	4/9	5/6	1/-	7/6
,, Ferri Arsenias, Ext. Nuc., and Aloin ...	3/-	5/-	5/9	6/3	1/-	8/6
Cascara Sagrada Liq. Ext., m 30	2/9	3/9	5/-	5/9	1/-	8/6
Castor Oil, m 10	2/-	3/-	3/9	4/-	-/8	5/-
,, ,, m 15	2/3	3/4	4/-	4/3	-/10	5/9
,, ,, m 20	2/6	4/-	5/-	5/3	1/-	7/3
,, ,, m 30	3/3	5/3	6/9	7/3	1/3	10/6
Cod Liver Oil, m 10	2/-	3/-	4/-	4/6	-/10	6/-
,, ,, ,, m 15	2/6	4/-	4/6	5/-	1/-	7/-
,, ,, ,, m 20	2/9	4/6	5/9	6/-	1/3	9/6
,, ,, ,, m 30	3/9	5/9	7/-	8/-	1/6	12/6
Copaiba Balsam, m 5 ...	2/-	3/-	3/6	4/-	-/8	6/-
,, ,, m 10 ...	2/3	3/2	4/-	4/6	-/10	7/-
,, ,, m 15 ...	2/8	4/6	5/-	5/6	1/-	9/6

	Per dozen Boxes of 12	24	30	36	Per 100	Per 1,000
Creasote, m 1	2/-	2/9	3/9	4/-	-/8	5/-
,, m 2	2/3	3/-	4/-	4/6	-/10	6/-
,, m 5	2/9	4/6	5/3	6/-	1/-	9/-
Haemoglobin 2 c. Hypophosphites = m 30 Syr.... ...	3/-	5/-	5/9	6/3	1/3	10/-
Male Fern, Ext. B.P., m 5	3/-	5/3	6/-	7/-	1/3	10/6
,, ,, ,, ,, m 10	3/6	6/-	7/3	8/3	1/9	16/-
,, ,, ,, ,, m 15	5/3	9/3	11/3	13/-	2/9	26/-
Nesbit's Specific, m 5 ...	3/6	6/6	7/3	8/6	1/9	15/3
,, ,, m 7½ ...	4/6	8/-	9/6	10/9	2/3	21/-
,, ,, m 10 ...	5/-	9/3	10/6	13/-	2/9	26/-
Santal Oil, English Distilled, m 5 ...	5/9	6/9	7/6		1/6	13/-
,, ,, ,, ,, m 10 ...	8/9	11/-	12/9		2/6	24/-
,, ,, Standard Size	7/3	9/-	10/3		2/-	18/9
Santal, Buchu, Cubebs, and Copaiba	3/3	6/9	8/-	9/-	2/-	16/9

These Capsules may be coloured to suit Customers; no extra charge.

Any combination will on request be immediately quoted for.

ONLY TERMS NETT CASH WITH ORDER.

Packages Free. Delivered Free. Finish Unsurpassed. All Goods Guaranteed.

SOLE ADDRESS:

The Pill, Tablet, & Capsule Alliance,

65 Rose Hill Street, DERBY.

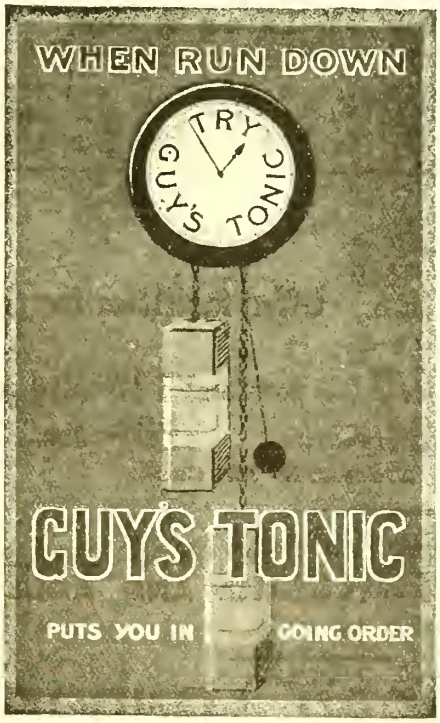
Guy's Tonic.

Guy's Tonic is the Standard British Remedy for Ailments arising from functional derangement of the Stomach and Liver, and is of the highest service as a Restorative in cases of Nervous Exhaustion and General Debility. It is a remarkably successful medicine, safe to take in all circumstances, and is widely recommended by Medical Men. In two sizes, **1/1½** and **2/9.**

Guy's Fruit Pills.

Guy's Fruit Pills contain the expressed juices of sound ripe Pharmacopoeial Fruits, incorporated in such proportions as to produce a perfectly safe, gentle and thoroughly effective Aperient. Their use is most beneficial in all cases where a reliable laxative is needed. In two sizes, **1/1½** and **2/9.**

Guy's Tonic and Guy's Fruit Pills are medicines of high repute, enjoying a large and steadily increasing sale in all parts of the World. The demand is well supported by consistent Advertising. Showcards, Dummies, and other advertising matter will be gladly supplied, carriage paid, upon application.



A DAINTY SHOWCARD FOR YOU.

Showcards are plentiful—really pretty and novel showcards are very scarce. The new card just produced for us may be fairly classed with the latter. It is not only attractive, but small and handy. This little card is the best thing of its kind that we have seen for a long time. It measures 9⅜ ins. by 6 ins. A postcard will bring you one. Apply to-day to—

Guy's Tonic Company,

12 Buckingham Palace Road,

LONDON, S.W.

Telephone: Gerrard 4240.

PRECIPITATED CHALK

(Creta Præcip.)

All qualities from the Lightest to the Purest and Whitest Dense.

Special Terms to Large Buyers.

Apply to the cheapest sellers in the market—

AUG. LEVERMORE & CO.

8-10 GT. ST. HELENS, LONDON, E.C.

Telegrams: "Levermore London." *A.B.C. Code used. 4th and 5th editions.* *Telephone 4613 Central.*

Prepared Chalk in Cones and Powder: French, School and Coloured Chalks, and Tailors' and other Crayons of all descriptions.

DR. STEDMAN'S TEETHING POWDERS.



Contain nothing to prevent exportation. Offer facilities for trading.

1/1½ size (9 powders) **2/9** (30 powders) **4/6** (60 powders) **11/-** (216 powders)
6/6 per doz. **18/-** doz. **34/-** doz. **120/-** doz.

Discount 5 per cent. on £10 worth for Cash.

Dr. STEDMAN'S WORM POWDERS FOR CHILDREN AND ADULTS.

1/1½ size, **9/6** per doz.

125 NEW NORTH ROAD, LONDON, N.

PRICES ISSUED WEEKLY.

Original Packages can generally be supplied at the Current Prices quoted in the Trade Report of this paper on Terms as below.

Acetanillde, B.P., 1 cwt. @ 11½d. lb.; 7 lbs. @ 1/2 lb.; 1 lb. @ 1/3 lb.
*Acid Acet. Glacial., 99%, Carboys 144 lbs. @ 4½d. lb.; 12 6-lb. bots. @ 6½d. lb.; 6 lbs. @ 8d.
Acid Acetylo-Salicyl, 56 lbs. @ 2/1 lb.; 7 lbs. @ 2/3 lb.; 1 lb. @ 2/5 lb.
„ Benz. B.P., 7 lbs. @ 1/8 lb.; 1 lb. @ 2/- lb.
„ Boric, Pulv., 3 cwt. @ 28/- cwt.; 1 cwt. @ 28/6 cwt.; Levigated, 3/- cwt. extra.
„ Carbol Xtls., 39/40; 56 lbs. @ 5½d. lb.; 10-lb. Tins @ 5/6 each; Detached Cryst. 8/- each; 36 1-lb. Bots. @ 9d. lb., Single Bots. 11d. lb.; Detached Cryst. 1 lb. @ 11d. lb.; Crude Black, 45 Gall. Casks @ 10d. gall.; 1 Gall. Tins @ 1/5 each.
„ Citric Cryst., B.P. '85, 1 cwt. @ 1/5 lb.; 7 lb. in Bags @ 1/6 lb.; powder ½d. extra.
„ Diethylbarbituric, 16 oz. @ 38/6 lb.; 1 oz. @ 2/8 oz.
„ Hydrobrom., dil., B.P., 6 lbs. @ 7d. lb.
„ Hydrochlor. Coml., cases of 4 2-gal. jars, 17/- each; 20 case lots @ 16/- each.
„ Oxalic Cryst., 5 cwt. @ 3¾d. lb.; 1 cwt. @ 3¾d. lb.; 14 lbs. @ 4d. lb.
„ Salloyl. pulv., 1 cwt. @ 1/1 lb.; 28 lbs. @ 1/2 lb.; 7 lbs. @ 1/3 lb.; phys. pure, 1 lb. @ 3/- lb.
„ Sulphur, Coml., cases, 4 2-gal. jars, 17/- each; 20 cases @ 16/- each.
„ Tart., cryst. or pulv., B.P. 1885, 1 cwt. @ 10½d. lb.; 7 lbs. @ 11½d. lb.; parv. ½d. lb. extra.

Fol. Sennæ Tinnev. 3½ cwt. @ 2½d. lb.; 1 cwt. @ 3½d. lb.; 7 lbs. @ 3½d. lb.; English Ground, 1 cwt. @ 5½d. lb.; 56 lb. @ 6d. lb.; 7 lbs. @ 7d. lb.
Formaldehyde, 40%, 132-lb. Carboys @ 50/- each; 7 lbs. @ 7½d. lb.
Gamboge English Ground, 7 lbs. @ 4/- lb.; 1 lb. @ 4/4 lb.
Gingerine, Extra, 5 lbs. @ 9/6 lb.; 1 lb. @ 10/- lb.
Lin. Camph. P.B., 40 lbs. @ 10½d. lb.; 9 lbs. @ 11½d. lb.
Lln. Sapo Meth., 9 lbs. @ 7d. lb.
Lln. Tereb. Acct., B.P., 9 lbs. @ 1/- lb.
Linseed o. Oil, Crushed, 3 cwt. @ 16/- cwt.; 1 cwt. @ 16/6 cwt.
*Liq. Ammonii Acetatis Conc. 1-7, 6 lbs. @ 10½d. lb.; 1 lb. @ 1/0½ lb.
* „ Ammon. Aromat., 6 lbs. @ 9d. lb.
* „ Antim. Chlor. Pure, 8 lbs. @ 6½d. lb.
* „ Arsenicalis, B.P., 7 lbs. @ 4d. lb.; 1 lb. @ 7d. lb.
* „ Arsenii Hydrochlor., P.B., 7 lbs. @ 4d. lb.; 1 lb. @ 7d. lb.
* „ Bismuth. P.B., 6 lbs. @ 10½d. lb.
* „ Easton., p.s. 1-3, B.P., 1 lb. @ 3/- lb.
* „ Ferri Iod. p.s. 1-7, 1 lb. @ 5/9 lb.
* „ Ferri Perchlor. Fort. P.B., 7 lbs. @ 4d. lb.
* „ Ferri Phosph. Co. p.s. 1-7, 7 lbs. @ 1/6.
* „ Hypophosph. Co. p.s. B.P.C., 1 lb. @ 3/4 lb.
* „ Iodi Fort. B.P., 5 lbs. @ 4/9 lb.
Shellac (Orange), 1½ cwt. @ 74/- cwt.; 7 lbs. @ 10d. lb.

*Syr. Tolut. P.B., 7 lbs. @ 7d. lb.
*Tinct. Aurant. Recens, B.P., bond, 5 lbs. @ 8½d. lb.
*Tinct. Belladon., B.P., bond, 5 lbs. @ 6½d. lb.
*Tinct. Benz. Co., B.P., bond, 5 lbs. @ 8½d. lb.
*Tinct. Camph. Co., B.P., bond, 5 lbs. @ 6¾d. lb.
*Tinct. Cantharidis, P.B., bond, 5 lbs. @ 6d. lb.
*Tinct. Capsici B.P., bond, 5 lbs. @ 6d. lb.
*Tinct. Card. Comp. P.B., bond, 5 lbs. @ 6½d. lb.
*Tinct. Catechu P.B. bond, 5 lbs. @ 6¾d. lb.
*Tinct. Chlorof. o. Morph. Comp., B.P. 1885; bond, 5 lbs. @ 1/5½d. lb.
*Tinct. Cinchon. Comp., B.P., bond, 5 lbs. @ 10½d. lb.
*Tinct. Cinchon. Rub., P.B., bond, 5 lbs. @ 10d. lb.
*Tinct. Digitalis, B.P., bond, 5 lbs. @ 8½d. lb.
*Tinct. Gelsem., B.P., bond, 5 lbs. @ 6½d. lb.
*Tinct. Gentianæ Comp., B.P., bond, 5 lbs. @ 6½d. lb.
*Tinct. Hyoscyami, B.P., bond, 5 lbs. @ 6½d. lb.
*Tinct. Iodi, B.P., bond, 5 lbs. @ 1/1½ lb.
*Tinct. Lavandulæ Comp., B.P., bond, 5 lbs. @ 7¾d. lb.
*Tinct. Myrrhæ, B.P., bond, 5 lbs. @ 9¾d. lb.
*Tinct. Nucis Vom., B.P., bond, 5 lbs. @ 6d. lb.
*Tinct. Opii, B.P., bond, 5 lbs. @ 1/10 lb.
*Tinct. Opii Amon., B.P., bond, 5 lbs. @ 1/10½ lb.
*Tinct. Quiniæ Amm., B.P., bond, 5 lbs. @ 11d. lb.
*Tinct. Rhei Co., B.P., bond, 5 lbs. @ 8d. lb.
*Tinct. Scillæ, B.P., bond, 5 lbs. @ 7½d. lb.
*Tinct. Senegæ, P.B., bond, 5 lbs. @ 1/3½ lb.

PRICE LIST ON APPLICATION.

EXPORT ORDERS A SPECIALITÉ.

Every care and attention given to INDENTS.

Aloes Barb., English Ground, 28 lbs. @ 70/- cwt.; 7 lbs. @ 8d. lb.
Aloin B.P., 1 lb. @ 3/9 lb. [7 lbs. @ 1/3 lb.
Ammon. Brom., P.B., 1 cwt. @ 1/1½ lb.; Camphor, English Flowers, "not artificial," 5 lbs. @ 1/11 lb.; ½ oz. 7 lbs. @ 2/1 lb.; ½ oz. 7 lbs. @ 2/4 lb., Crude, 140 lbs. @ 1/4½d. lb.; 28 lbs. at 1/6 lb.
*Ext. Belladonnæ Liq. B.P., 5 lbs. @ 4/7 lb.; 1 lb. @ 5/- lb.; bond, 2/6 lb.
Ext. Cascara Sag. Liq., B.P., 10 lbs. @ 1/2 lb.; bond, 11d. lb.
*Ext. Ergot. Liq. P.B., 5 lbs. @ 3/1 lb.; 1 lb. @ 3/4 lb.; bond, 1/0½ lb.
Ext. Gent., P.B., Solid, 1 cwt. @ 8½d. lb.; 7 lbs. @ 9½d. lb.
* „ Glycyrrh. Liq. B.P., 6 lbs. @ 1/6 lb.; bond, 10½d. lb.
„ Hyoscyam. Solid B.P., 3 lbs. @ 6/- lb; 1 lb. @ 6 9 lb.
*Ext. Ipecac. Liq. P.B., 5 lbs. @ 11/- lb.; 1 lb. @ 11/9 lb.; bond, 9/6 lb.
*Ext. Nucis Vom. Liq. B.P., 5 lbs. @ 3/3 lb.; 1 lb. @ 3/6 lb.; bond, 1/5½ lb.
Ferri Carb., 1 cwt. @ 21/- cwt.; 28 lbs. @ 3d. lb.
Ferri et Quininæ Cit., P.B.; 500 ozs. @ 3d. oz.; 100 ozs. @ 3½d. oz.; 25 ozs. @ 3½d. oz.
Fol. Hyoscyam. Sien., 7 lbs. @ 12/9 lb.

Soda Caustica, 28-lb. tin @ 8½d. lb.; 6 1-lb. Bots. @ 10d. lb.
Soda Cit., B.P., 3 lbs. @ 1/10 lb.
Sodii Bromid. P.B., 1 cwt. @ 1/0½ lb.; 7 lbs. @ 1/2 lb.
Sodii Hyposulphite, pea cryst., 1 cwt. @ 8/6 cwt.
Soda Salicyl. Pulv., 1 cwt. @ 1/5 lb.; 28 lbs. @ 1/6 lb.; 7 lbs. @ 1/7 lb.; phys. pur., 28 lbs. @ 2/2 lb.; 1 lb. @ 2/5 lb.
Soda Sulphocarbolas B.P., 7 lbs. @ 10½d. lb.; 1 lb. @ 1/1 lb.
*Spt. Æther Nit. P.B., 4½ lbs. @ 3/6 lb.; 1 lb. @ 3/9 lb.; bond, 8d.
*Sp. Ammon. Aromat. P.B., 5 lbs. @ 2/8½ lb.; bond, 6½d.
*Spt. Chloroformi, P.B., 5 lbs. @ 3/7 lb.; bond, 8½d.
Sugar of Milk, B.P., 1 cwt. @ 44/- cwt.; 7 lbs. @ 6d. lb.
*Syr. Aurant. P.B., 7 lbs. @ 8d. lb.
*Syr. Easton B.P., 7 lbs. @ 1/- lb.
* „ Ferri Iodid. P.B., 7 lbs. @ 1/1 lb.
* „ Ferri Phosphat. Co., 7 lbs. @ 5d. lb.
* „ Hypophosph. Co. B.P.C., 7 lbs. @ 9d. lb.
* „ Prunl Virg. B.P., 8 lbs. @ 7d. lb.
* „ Rhamni, 7 lbs. @ 10d. lb.
* „ Rhei P.B., 7 lbs. @ 7½d. lb.
* „ Scillæ P.B., 7 lbs. @ 4½d. lb.
* „ Sennæ P.B., 7 lbs. @ 8d. lb.

*Tinct. Strophanth. P.B., bond, 5 lbs. @ 8½d. lb.
*Tinct. Valerianæ, bond, 5 lbs. @ 6d. lb.
*Tinct. Valerianæ Ammon., P.B., 5 lbs. @ 8½d. lb.
*Tinct. Zingib., P.B., bond, 5 lbs. @ 6½d. lb.
*Tinct. Zingib. Fortior, bond 5 lbs. @ 10½d. lb.
Ung. Acid. Boric. P.B., 28 lbs. @ 6½d. lb.; Flav. 28 lbs. @ 4½d. lb.
„ Acid Carbol. B.P., 28 lbs. @ 8d. lb.; 7 lbs. @ 9d. lb.; 1 lb. @ 11d. lb.
„ Gallæ P.B., 7 lbs. @ 10d. lb.; 1 lb. @ 11d. lb.
c. Opio, 7 lbs. @ 2/2 lb.
„ Hydrargyri B.P., 28 lbs. @ 1/8 lb.; 7 lbs. @ 1/9½ lb.
„ Hydrarg. Ammon. B.P., 28 lbs. @ 11d. lb.; 7 lbs. @ 1/2 lb.
„ Hyd. Nit. Dil., 7 lbs. @ 10d. lb.
„ Paraff. Alb., P.B., 28 lbs. @ 7d. lb.; 7 lbs. @ 8d. lb.; 1 lb. @ 10d. lb.; Flav. 28 lbs. @ 5d. lb.; 7 lbs. @ 6½d. lb.
„ Resinæ, P.B., 28 lbs. @ 9d. lb.; 7 lbs. @ 10d. lb.
„ Sulphuris B.P., 28 lbs. @ 8d. lb.; 7 lbs. @ 9d. lb.
Zinci Oxid., Whitest and Lightest B.P., 1 cwt. @ 34/- cwt.; 28 lbs. @ 4½d. lb.; 7 lbs. @ 5d. lb.
Zinci Sulph., pure, 1 cwt. @ 15/- cwt.; 28 lbs. @ 2½d. lb. @ 1/1 lb.
„ Sulphocarbolas B.P. 7 lbs. @ 10½d. lb.; 1 lb.

*Minimum quantity at these prices, Home Trade, 3 Winchester Quarts assorted. Export, 12 Winchester Quarts assorted.

NOTE.—Only Terms Net Cash with order without discount, or orders accepted through London Merchants or Bankers. Goods carriage forward; all packages free; Export cases extra.

ALLIANCE DRUG & CHEMICAL CO., LONDON.

Office: 34 LEADENHALL STREET.

KINDLY DETACH THIS SHEET AND PLACE IT IN YOUR BUYING BOOK.

Many schemes are afoot to-day for the benefit of chemists. That any of them will mature is doubtful. That any real benefit would accrue upon their maturity is also doubtful. All are contingent upon your cash being subscribed in sufficiently large sums to enable them to float. The benefits you must take on trust.

We work differently. We also are out with a proposition for the benefit of chemists. We have something to sell, but we are not trying to sell promises of benefits to come. In exchange for your cash we offer you goods, which you in turn can convert into cash again.

There is something solid and definite about our scheme. It is working now. We do not say we are going to do something. We are doing it. And some chemists will be having a free summer holiday, with pocket money in addition, as a result of our modest efforts. We repeat, there is something tangible about our proposition.

There is no preliminary subscription required before you participate in the benefits we offer. We find the capital, and we look to you to send up the business. This little effort is all we ask, and it will save you money instead of causing extra expenditure.

We have expended a considerable sum of money in booming the benefits of co-operation. We shall continue to spend money for the same purpose, for we can support our statements by facts. As witness :

All customers whose purchases for the six months ending June 30th amounted to not less than £25 have received a cash bonus at the rate of THREE per cent. on their total purchases. All customers whose purchases for the six months amounted to not less than £50 have received a cash bonus at the rate of EIGHT per cent. Look at our prices !

.. THE ..

Chemist's Co-operative Wholesale

5 & 7 Laburnum St., Kingsland Rd.

LONDON, N.E.

. . THE . .

CHEMIST'S CO-OPERATIVE WHOLESALE.

Guaiacol Carbonate. 1 lb. @ 5/- lb.
Gum Acacia Sorts. 7 lbs. @ 5½d. lb.
,, ,, Pulv. Opt. 7 lbs. @ 11d. lb.
,, Tragacanth. Pulv. Opt. 7 lbs. @ 3/4 lb.; 1 lb. @ 3/7.
Hexamethylenetetramine. 28 lbs. @ 1/11 lb.; 7 lbs. @ 2/-; 1 lb. @ 2/3. 2/11.
Hydrarg. Ammon. B.P. 28 lbs. @ 2/10 lb.; 7 lbs. @
,, Iodid. Rub. B.P. 28 lbs. @ 8/5 lb.; 7 lbs. @ 8/6. [@ 3/2.
,, Oxid. Flav. B.P. 28 lbs. @ 3/1 lb.; 7 lbs.
,, Oxid. Rub. B.P. 28 lbs. @ 2/10 lb.; 7 lbs @ 2/11. [@ 2/4½.
,, Perchlor. B.P. 28 lbs. @ 2/3½ lb.; 7 lbs.
,, Subchlor. B.P. 28 lbs. @ 2/7 lb.; 7 lbs. @ 2/8.
Hydrogen Peroxide. 10 vols. 1 gln. @ 2/6 gln.
Ichthyol Ammon. 3 lbs. @ 10/6 lb.; 1 lb. @ 10/9.
Infus. Aurant. Co. Conc., 1 to 7. 6 lbs. @ 1/1 lb.
,, Buchu Conc., 1 to 7. 6 lbs. @ 1/3 lb.
,, Calumbæ Conc., 1 to 7. 6 lbs. @ 11d. lb.
,, Cinchonæ Acid. Conc., 1 to 7. 6 lbs. @ 1/4 lb.
,, Gentian Co. Conc., 1 to 7. 6 lbs. @ 11d. lb. -
,, Quassiæ Conc., 1 to 7. 6 lbs. @ 9d. lb.
,, Rhei Conc., 1 to 7. 6 lbs. @ 1/1 lb.
,, Senegæ Conc., 1 to 7. 6 lbs. @ 1/10 lb.
Lin. Aconiti Meth. 6 lbs. @ 10d. lb.
,, Album. 6 lbs. @ 5d. lb.
,, Belladon. Meth. 6 lbs. @ 1/2 lb.
,, Camph. Ammon. Meth. 6 lbs. @ 11d. lb.
,, ,, B.P. 40 lbs. @ 11d. lb..; 9 lbs. @ 1/-
,, Saponis Meth., 6 lbs. @ 6½d. lb.
Lint, Surgeons'. 7 lbs. @ 1/2 lb.
Liq. Ammon. Acet. Conc., 1 to 7. 6 lbs. @ 9d. lb.
,, Copaibæ Co. 5 lbs. @ 2/3 lb.
,, Bismuthi B.P. 6 lbs. @ 10½d.
,, Morphinæ Acet. B.P. 6 lbs. @ 2/- lb.
,, ,, Hydrochlor. B.P. 6 lbs. @ 2/- lb.
,, Rhei pro Syr., 1 to 7. 6 lbs. @ 1/8 lb.
,, Santal Co. 6 lbs. @ 3/- lb.
,, Sennæ pro Syr., 1 to 3. 6 lbs. @ 1/6 lb.
Magnes. Sulph. Opt. 1 cwt. @ 5/9 cwt.
Mel. Opt., Pale Set. 1 cwt. @ 36/- cwt.; 7 lbs. @ 5d. lb.
Mist. Sennæ Co. B.P. 20 lbs. @ 6½d. lb.; 6 lbs. @ 7½d.
Morphinæ Acet. or Hydrochlor. Pulv. B.P. 16 oz. @ 6/4 oz.; 1 oz. @ 6/8.
Naphthaline, Candle, Marble or Flake. 1 cwt. @ 11/- cwt.; 28 lbs. @ 13/- cwt.
Oleum Amygd. Dulc Ang. B.P. 9 lbs. @ 2/1 lb.
,, ,, Persic. 9 lbs. @ 11½d. lb.
,, ,, Essent., Artificial. 9 lbs. @ 2/6 lb.
,, Caryoph. Ang. B.P. 5 lbs. @ 3/2 lb.; 1 lb. @ 3/6.
,, Eucalypti B.P. 9 lbs. @ 1/3½ lb.
,, Juniper Wood. 9 lbs. @ 1/5 lb.
,, Lavand. Gall. Opt. 1 lb. @ 8/- lb.
,, Limonis (Guaranteed Absolutely Pure). 12 lbs. @ 4/2 lb.; 1 lb. @ 4/8
,, Santal. Flav. Ang. B.P. 5 lbs. @ 10/6 lb.; 1 lb. @ 10/9.
,, Sinapis Expressed. 9 lbs. @ 6d. lb.
,, Wintergreen, Artificial. 5 lbs. @ 1/8 lb.; 1 lb. @ 1/10.
Opium Turc. (10½% Morphine). 7 lbs. @ 13/6 lb.; 1 lb. @ 14/-.
Oxymel Scillæ B.P. 28 lbs. @ 4½d. lb.; 7 lbs. @ 5d.
Phenacetin B.P. 28 lbs. @ 2/6 lb.; 7 lbs. @ 2/7; 1 lb. @ 2/9.
Phenazonum B.P. 7 lbs. @ 6/9 lb.; 1 lb. @ 7/-.
Podophyllin Resin B.P. 7 lbs. @ 10/- lb.; 1 lb. @ 10/3.
Potassa Caustica Stick B.P. 28 lbs. @ 9d. lb.; 7 1-lb. Bots. @ 10d.
Potass. Bicarb. B.P. Pulv. 1 cwt. @ 30/- cwt.; 7 lbs. @ 4d. lb.
,, Bromid. B.P. 1 cwt. @ 10½d. lb.; 28 lbs. @ 11d.; 7 lbs. @ 1/-.
,, Iodid. B.P. 1 cwt. @ 7/6 lb.; 14 lbs. @ 7/8; 3 lbs. @ 7/11; 1 lb. @ 8/2.
,, Permang. Cryst. B.P. 1 cwt. @ 37/6 cwt.; 7 lbs. @ 5d.
Pulv. Glycyrrh. Co. B.P. 28 lbs. @ 30/- cwt.
Quinin Sulph. B.P. 100 ozs. @ 6¾d. oz.; 25 ozs. @ 7½d.; 10 ozs. @ 8d.
Rad. Jalapæ Pulv. B.P. 7 lbs. @ 1/10 lb.; 1 lb. @ 2/-.
Santoninum B.P. 7 lbs. @ 14/- lb.; 1 lb. @ 14/6.
Sodii Bicarb. Opt. (B. M. & Co.). 1 cwt. @ 6/6 cwt.
,, Hyposulph Pea Cryst. 1 cwt. @ 8/- cwt.
Spt. Æther. Nit. B.P. 5 lbs. @ 3/5 lb.
,, Ammon. Aromat. B.P. 5 lbs. @ 2/9 lb.
Succus Belladon. B.P. 5 lbs. @ 1/6 lb.
,, Conii B.P. 5 lbs. @ 1/4 lb.
,, Digitalis. 5 lbs. @ 1/7 lb.
,, Hyoscyami B.P. 5 lbs. @ 1/9 lb.
,, Taraxaci B.P. 5 lbs. @ 1/4 lb.
Sulphonal B.P. 1 lb. @ 9/3 lb.
Sulphur Sublim. 1 cwt. @ 7/9 cwt.
Tinct. Aconiti B.P. 5 lbs. @ 2/8 lb.
,, Aloes B.P. 5 lbs. @ 2/- lb.
,, Aurantii Recens B.P. 5 lbs. @ 3/2 lb.
,, Belladonnæ B.P. 5 lbs. @ 2/8 lb.
,, Benzoin. Co. B.P. 5 lbs. @ 3/3 lb.
,, Buchu B.P. 5 lbs. @ 2/8 lb.
,, Calumbæ B.P. 5 lbs. @ 2/4 lb.
,, Camph Co. B.P. 5 lbs. @ 2/4 lb. -
,, Canthar. B.P. 5 lbs. @ 3/6 lb.
,, Capsici B.P. 5 lbs. @ 2/8 lb.
,, Cardam. Co. B.P. 5 lbs. @ 2/5 lb.
,, Catechu. B.P. 5 lbs. @ 2/3 lb.
,, Chlorof. c. Morph. B.P. 1885. 5 lbs. @ 1/8 lb.
,, Cinchonæ. 5 lbs. @ 3/- lb.
,, ,, Co. 5 lbs. @ 3/- lb.
,, Digitalis B.P. 5 lbs. @ 2/6 lb.
,, Gelsemii B.P. 5 lbs. @ 2/7 lb.
,, Gent Co. B.P. 5 lbs. @ 1/11 lb. -
,, Guaiaci Ammon. B.P. 5 lbs. @ 3/2 lb.
,, Hyoscyam. B.P. 5 lbs. @ 2/7 lb.
,, Iodi B.P. 5 lbs. @ 3/9 lb.
,, Lavand. Co. B.P. 5 lbs. @ 3/5 lb.
,, Myrrh. B.P. 5 lbs. @ 3/6 lb.
,, Nucis Vom. B.P. 5 lbs. @ 2/4 lb.
,, Opii B.P. 5 lbs. @ 2/9 lb.
,, ,, Aquosa. 5 lbs. @ 2/- lb.
,, Quinin. Ammon. B.P. 5 lbs. @ 2/4 lb.
,, Rhei Co. B.P. 5 lbs. @ 2/3 lb.
,, Scillæ B.P. 5 lbs. @ 2/5 lb.
,, Senegæ B.P. 5 lbs. 2/10 lb.
,, Zingib. B.P. 5 lbs. @ 3/6 lb.
,, ,, Fort. B.P. 1885. 5 lbs. @ 3/10 lb.
Ung. Acid. Boric. B.P. 28 lbs. @ 6d. lb.; 7 lbs. @ 7d.
,, Resinæ B.P. 28 lbs. @ 10d. lb.; 7 lbs. @ 11d.
,, Sulphuris B.P. 28 lbs. @ 8d. lb.; 7 lbs. @ 9d.

NOTE.—Our Premises will be closed on Saturday, July 31st.

5 & 7 Laburnum Street, Kingsland Road, LONDON, N.E.

TERMS: Cash with order. Packages free.
Carriage paid terms on application.

Telegrams: "RUBIFIQUE LONDON." Telephone: Dalston 612.

POTTER & CLARKE LTD.

THE ORIGINAL MAKERS

RASPBERRY
— and —
SULPHUR CREAMS

FLUID EXTRACTS

COATED PILLS

NEW REMEDIES

FRUIT ESSENCES

DRUG GRINDERS

LOZENGES

4 lb. Boxes **8d.** per lb.



28 lb. Lots **65/-** per cwt.

Better than Sulphur Tablets.
Only show them,
They sell themselves.

Free Sample on receipt of Post Card.

POTTER'S ASTHMA CURE

GROWERS & IMPORTERS OF HERBS. ROOTS. & BARKS

HERBS IN PACKETS

POTTER & CLARKE. LTD. WHOLESALE DRUGGISTS EXPORTERS IN BOND
60-64. ARTILLERY LANE. LONDON. E.

GLASS BOTTLES (Wholesale & Export only)

Every description of bottles for chemists and druggists, confectioners, &c. Special prices for Limes, Kalis, Mexican Flats, Panelled Flats, Wickered Colognes, Perfumery Bottles. Machine-made Pots, Opal Pots and Celluloid Caps, Screw Feeders and Hygienic Feeders, &c., &c. Best manufacture.

BOLING, BROWN & CO., 1 ALDERSGATE BUILDINGS, ALDERSGATE STREET, E.C.

Telephone: 1726 CITY. Telegraphic Address: "GLASSDOM."

COCAINE

MORPHINE

and their Salts.

CODEINE

Narcotine **Cotarnine**

C. H. BOEHRINGER SOHN,

Nieder-Ingelheim-on-Rhine.

FOR SPECIAL OFFERS ADDRESS MY AGENTS: MESSRS. W. CAUDERY & CO., 1 FENCHURCH AVENUE, LONDON, E.C.

THE "GIANT" REMEDY.

Tel. Add.: "Giant, Plymouth."

BOX'S PILLS

WRITE FOR TRADE TERMS.

Re-christened by the Americans

"The Great English Remedy."

1s. 1½d., 2s. 9d., 4s. 6d., 11s., and £1 1s.

Prepared only by

W. H. BOX, 161 KING ST., PLYMOUTH.

You get 25% Profit

WHEN YOU SELL

CURRY'S REMEDIES

(On P.A.T.A.)

	Face Value.	Min. Retail Price.	Min. Wholesale Price.
CURRY'S Ointment, CURRY'S Herbal Pills, CURRY'S Tonic Digestive Tablets.	1/-	1/-	9/- per doz.

Above Prices are for orders, one Dozen and over. Odd lots under one Dozen at 10s. Dozen rate. All carriage paid. Show Cards and Counter Bills supplied free.

CASH WITH ORDER. MIXED ORDERS SENT.

HENRY CURRY, 14 Scarborough St., WEST HARTLEPOOL.

ESFON

The Nerve Food.

A Powder-Food that CURES.
Reinforces the NERVES.
Strengthens the system.
Appeals especially to Vegetarians.
Most palatable and really curative.
Interesting booklet on the relation of food to the nervous system.
A booklet on the counter and the Food sells itself.
Minimum retail price, 1/6, 3/-, 6/-.

ESFON

C. J. BURT,

12 & 13 Henrietta St., London, W.C.

SAL HEPATICA.

PUT UP FOR EXPORT:

Small size, 3 oz. bottle, in case.
Medium ,, 7 ,, ,, ,,
Large ,, 16 ,, ,, ,,

OBTAINABLE IN LONDON FROM

Thos. Christy & Co., 4-12 Old Swan Lane, Upper Thames Street, E.C.

The American Drug Stores, 4 Northumberland Avenue, Charing Cross, W.C., and Craven House, Kingsway, W.C.

Burgoyne, Burbidges, & Co., 16 Coleman Street, E.C.

F. Newbery & Sons, Ltd., 27 Charterhouse Square.

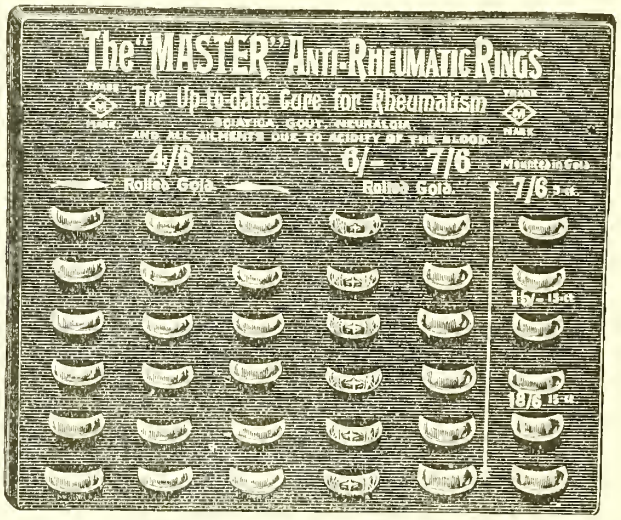
Roberts & Co., 76 New Bond Street, W.



THE

"MASTER" ANTI-RHEUMATIC RINGS.

THE RINGS MAY BE WORN ON ANY FINGER.



RETAIN THEIR POWER FOR ANY LENGTH OF TIME.

SPECIAL OFFER.—This handsome plush-covered, gold-lettered showstand, containing three dozen assorted rings, as illustration, retailing at £12 4 0.

Price complete £6 0 0

	Covered in rolled gold, stamped.		9-carat gold, stamped.		15-carat gold, stamped.		18-carat gold, stamped.	
	Retail price. each.	Trade price. each.	Retail price. each.	Trade price. each.	Retail price. each.	Trade price. each.	Retail price. each.	Trade price. each.
No. 1501. Ordinary width...	4 6	2 6	7 6	4 6	15 0	9 6	21 0	13 6
,, 1502. Belcher shape ...	7 6	4 6	10 6	6 6	18 6	11 0	24 0	15 0
,, 1503. Chased	6 0	3 6	9 0	5 6	18 6	11 0	24 0	15 0

No. 1501, covered in rolled gold, is the best selling line.

SPECIAL PRICE, per doz., 24s. 0d.

With each DOZEN RINGS we supply, gratis, a handsome plush-covered showstand. Also a supply of neat booklets with full descriptive matter. Regulation size measurement cards free.

N.B.—Rings exchanged for other sizes if required. No license is required for the sale of these rings.

Try our well-known "EMPIRE" Brands of Goods.

BRIEF LIST OF GOOD SELLING LINES.

ATOMIZERS, Nasal and Throat.
BANDAGES, India-rubber.
BELTS, Lady's and Gent's.
CLINICAL THERMOMETERS.
COMBS, Horn and Vulcanite.
CUSHIONS, Air and Water.
ENEMAS, all kinds.
GLYCERINE SYRINGES.
HOT WATER BOTTLES.
NASAL DOUCHES.
STOCKINGS, KNEE CAPS, TRUSSES, all kinds. [etc.
VAGINAL DOUCHES,
WATER BEDS AND SHEETINGS.

N.B.—**5 per cent.** discount allowed for prompt cash off above and all List prices. CARRIAGE PAID on Orders of £2 and upwards to any town in the United Kingdom.

Write for **new** Illustrated Price List, now ready, post free.

OUR GOODS ARE RIGHT AND PRICES LOW.

BURGE, WARREN & RIDGLEY, LIM., 91 & 92 GT. SAFFRON HILL, LONDON, E.C.

KHAKI COLOURED ELASTIC HOSIERY.

Something New for the Summer Season.

IT LOOKS WELL. SELLS WELL. WEARS WELL.

This new colour was originally made up for wear by athletes, cyclists, &c., who find it preferable in many ways to white, but we find that wherever shown it has commended itself to all classes of wearers of elastic hosiery, and has been sold freely by every chemist who has stocked it. It is somewhat cheaper than the ordinary white article, but is not in any way inferior either in the quality of the elastic or the cotton, while it is much less easily soiled. In order to induce chemists to stock a range of sizes we are offering a specially low price for purchasers of not less than one dozen pairs at a time. Try a sample pair—money back in full if you do not like them.

NOTE THE LOW PRICES.

KHAKI coloured cotton elastic ***Stockings***, sizes 1 to 8	... ... per pair	***2s. 6d.***
,, ,, ,, ,,	... per doz. pairs	***27s. 0d.***
KHAKI coloured cotton elastic ***Knee Caps*** sizes 1 to 8	... ... per pair	***1s. 9d.***
,, ,, ,, ,,	... per doz. pairs	***18s. 0d.***

N.B.—Out sizes and Specials are not made in this colour.

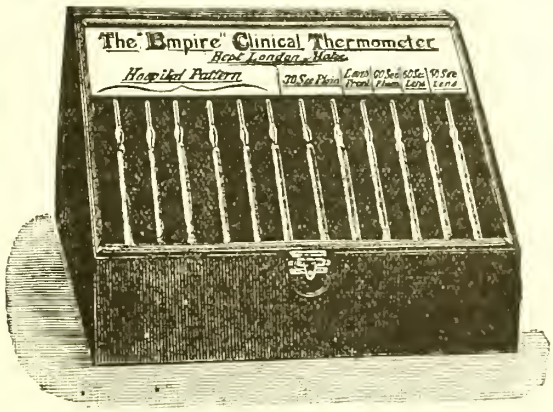
THE "EMPIRE"

CLINICAL THERMOMETERS.

Guaranteed Best London Make from Well-seasoned Tubes.

PRICES.

	Per doz.
"Hospital" Pattern, in metal case ...	9 0
"Hospital" Pattern, in 3 dozen lots ...	8 6
"Hospital" Pattern, in 6 dozen lots ...	8 0
"Hospital" Pattern, lens front... ...	13 0
Certificate of accuracy for any Thermometer	5 0



PRICES.

	Per doz.
60 second, plain ...	12 0
,, lens front	16 0
30 second, plain ...	13 6
,, lens front	20 0
Certificate of accuracy verified by Kew Observatory	12 0

Each Thermometer is packed in a specially designed card box with descriptive label on lid. We accept all risk from breakage in transit if advised by return of post.

A Glass-topped Showcase, as above illustration, GIVEN FREE with orders for 3 dozen Thermometers.

N.B.—**5 per cent.** discount allowed for prompt cash off above and all List prices. CARRIAGE PAID on orders of £2 and upwards to any town in the United Kingdom.

Write for **new** Illustrated Price List, now ready, post free.

OUR GOODS ARE RIGHT AND PRICES LOW.

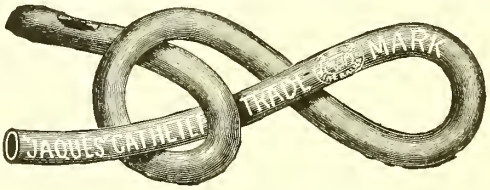
BURGE, WARREN & RIDGLEY, LIM., 91 & 92 GT. SAFFRON HILL, LONDON, E.C.

WM. WARNE & CO. LTD.

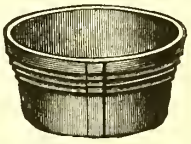
INDIA RUBBER

MANUFACTURERS.

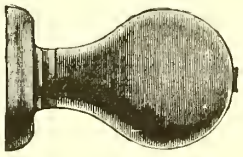
Patentees of the New Moulded Enema, &c.













Manufacturers of every description of

SURGICAL,
CHEMICAL,
GYMNASTIC,
DOMESTIC,
VETERINARY,
and
MECHANICAL
ARTICLES,
SYRINGES,
ENEMAS,



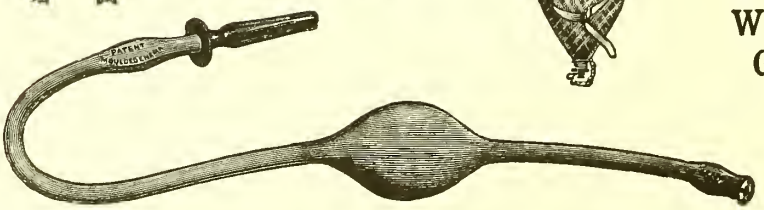
PATENT MINERALIZED

TRADE MARKS.





WATER BEDS
and
CUSHIONS,
THREAD,
HOSE, TUBE,
TOBACCO
POUCHES,
MATS, BANDS,
WATERPROOF
GARMENTS,
&c.











Manufacturers of every description of

INDIA RUBBER.





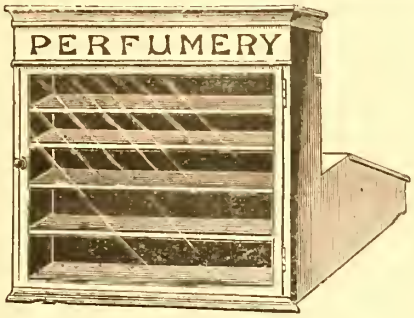
29 GRESHAM ST., LONDON, E.C.

WHOLESALE AND EXPORT ONLY.

RUDDUCK & COMPANY,

Complete Shop & Office Fitters, Shop Front Builders, &c.

262, OLD STREET, LONDON, E.C.

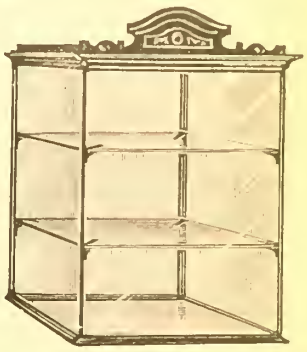


No. 8.

This Illustration represents:—

Perfume Case and Desk, 24-in. wide x 2-ft. 6-in. high, Mahogany and **PLATE GLASS** Case, Lock and Key, Moveable Plate Glass Shelves, and Plate Glass Mirror back, attractively lettered **PERFUMERY**, Mahogany Desk with lift up Flap, Lock and Key, Stamp Drawer, &c., inside.

Price **£3 17s. 6d.**



No. 10.

This Illustration represents:—

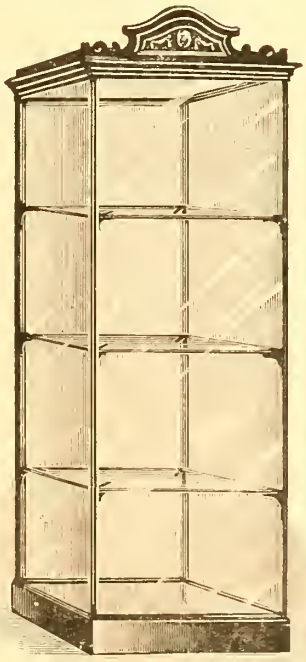
UPRIGHT SHOW CASE (to stand on counter) **AIR TIGHT,** made in Mahogany, Oak, or other hardwood, well French Polished, Glazed **PLATE GLASS** throughout with door to open at back. Fitted inside with 2 Moveable Plate Glass Shelves (with polished edges), on Adjustable Brackets. Size 33-in. high x 24-in. wide x 22 in. back to front.

Price **£6 10s.**

No. 11.

This Illusiration represents:—

UPRIGHT SHOW CASE (to stand on floor) **AIR-TIGHT,** made in Mahogany, Oak, or other hard wood, well French Polished, Glazed **PLATE GLASS** through out, with door to open. Fitted inside with 3 Moveable Plate Glass Shelves (with polished edges), on Adjustable Brackets. Size, 6-ft. high x 2-ft. wide x 2-ft. back to front.



Price £10 10s.

No. 3.

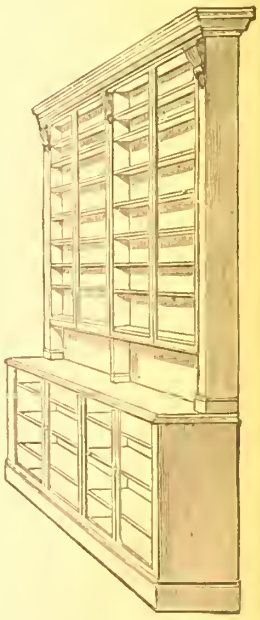
This Illustration represents:—

CHEMISTS' WALL CASE.

8-ft. long x 9-ft. high, upper part from 6-in. to 7 in. deep, lower part from 13-in. to 15-in. deep, fitted with Moveable Shelves, Mahogany Sashes, Recess Top, Pilasters, and Cornice.

Glazed Stout Sheet,
Price **£12.**

Glazed ¼ Plate,
Price **£14.**



N.B.—Large Quantity of Second-Hand Show Cases (High-Class only) always on hand.
Show Cases lent out on Hire.

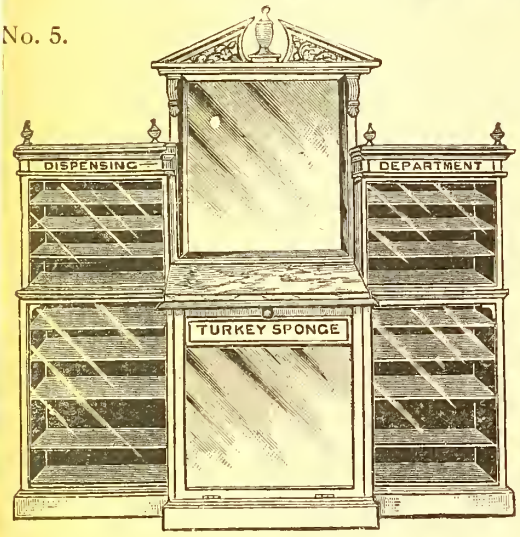
TERMS—Nett Cash. Free on Rail, Carriage Forward. Estimates Free.
Packing Cases are charged at Cost. Amount refunded in full if returned Carriage Paid within One Month.

RUDDUCK & Co.,

Shop Fitters and Shop Front Builders,

262, OLD STREET, LONDON, E.C.

No. 5.



This Illustration represents:—

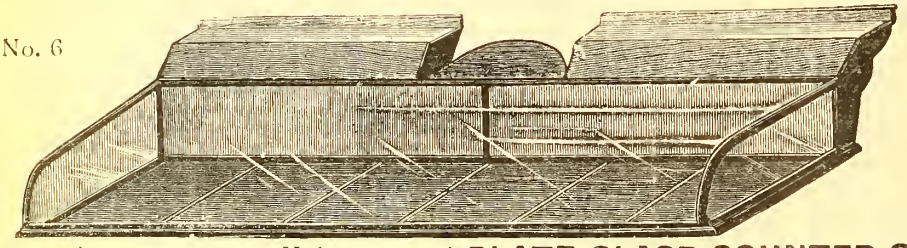
DISPENSING SCREEN AND COUNTER 6-ft. long x 6-ft. high (about).

Description of Counter:—
Mahogany Top Counter with O.G. Nosing, Two Mahogany and **PLATE GLASS** Show Cases in Front, fitted with shelves, with **PLATE GLASS** projecting Sponge Case in centre, attractively Lettered **TURKEY SPONGE.**

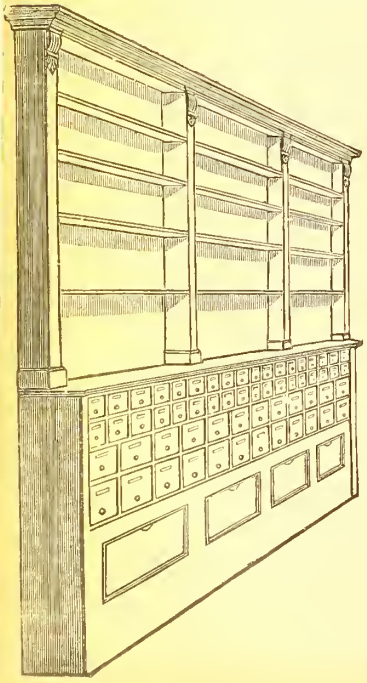
Description of Screen:—
Mahogany with **PLATE GLASS** Bevelled Mirror in centre, with **PLATE GLASS** Show Case each side, fitted inside with **PLATE GLASS** Mirror back, and Moveable Plate Glass Shelves, usual Shelves at back of Screen.

Price **£15.**

No. 6



This Illustration represents:—Mahogany and **PLATE GLASS COUNTER CASE** 6-ft. long x 18-in. wide, **PLATE GLASS** Ends, **PLATE GLASS** Mirror Flaps at back with Spring Catches, Mahogany Display Shelf with serving place in centre, fitted inside with Velveteen Lined Trays. Price **£6.**



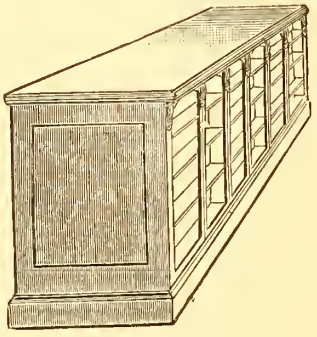
No. 2.

This Illustration represents:

CHEMISTS' FITTING,

12-ft. long x 9-ft. high, with 60 Solid Mahogany Fronted Drawers with Cut Glass Knobs and Bevelled Edge Glass Labels with Lockers under same, Mahogany faced cover Board over Drawers, Mahogany Faced Shelves with Mahogany Pilasters and Mahogany Cornice over top.

Price **£15.**



No. 4.

This Illustration represents:—

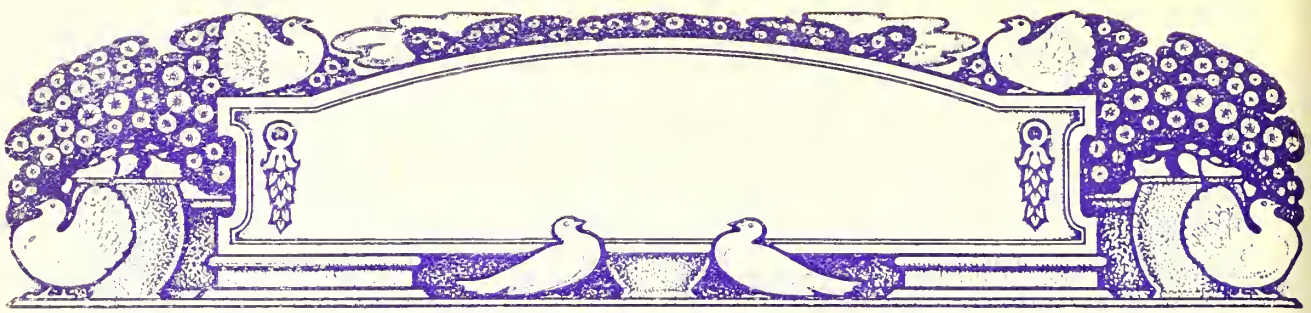
CHEMISTS' COUNTER

12-ft. long x 2-ft. wide x 3-ft. high Solid Mahogany Top with O.G. Nosing, Mahogany and **PLATE GLASS** Show Case in Front, fitted with Moveable Shelves.

Price **£10.**

ABOUT PRINTING

SPOTTISWOODE & CO., LTD.
5 New Street Square,
London, E.C.



Effective Printing.

IT is a common fallacy that Effective Printing must necessarily be expensive. Outlay alone will not produce good effects. The best paper, ink, and most careful work may be employed, and yet the combined result may fail to appeal to the recipient.

Style plays an important part in the scheme of Effective Printing, and when issuing advertising matter in any form the advertiser's first consideration should be to compel attention. His literature should bear upon it some feature of distinction, in order that it may stand out from among the mass of advertising material which is nowadays promiscuously circulated, or its mission will be lost. Whatever may be the nature of the work to be issued, its appearance—its "get-up"—must be carefully considered and designed, for by the first impressions obtained will it stand or fall. A trade circular, for instance, may be either thrown away on receipt or kept for future reference by the person who receives it. In most cases the reason for keeping it will be found in its artistic attractiveness pleasing the eye, and thus securing the certainty of careful perusal.

But there is something more. Your standing as a firm is judged by the printed matter you issue; therefore it is essential that your printer should appreciate your reputation in this respect, and safeguard your interests.

Our Facilities.

The great advance in the standard of Modern Printing is largely due to recent improvements in the technique of the art—developments unprecedented throughout the long chapters of its history. We not only keep abreast of the times in every detail of our business, but possess facilities unsurpassed by any printing-house in the world.

Our Staff.

Our staff is also specially trained to produce printed matter in the highly artistic style with which our name is associated, and we are prepared to make suggestions and to advise upon any work in contemplation, or to send a qualified representative at any time, with examples of our work, to receive instructions.

Our Work.

We produce every description of advertising literature, from the simplest card or circular to the mammoth wall poster, and from the daintiest brochure to the largest catalogue. Our plant enables us to deal with all kinds of work, not only with artistic treatment, but with promptitude and at economical prices.

SPOTTISWOODE & CO. LTD.

5 New Street Square, London, E.C.

SPOTTISWOODE & CO. LTD.
5 NEW STREET SQUARE, LONDON, E.C.
COLCHESTER
LIVERPOOL
AND ETON

All Communications should be addressed to the Selwood Printing Works.

BUTLER & TANNER
LETTERPRESS AND COLOUR PRINTERS

BUTLER & TANNER
THE SELWOOD PRINTING WORKS — THE ADDERWELL PRINTING WORKS
FROME

LONDON OFFICE
19 LUDGATE HILL E.C.
TELEGRAPHIC ADDRESSES
TYPENWAY LONDON
SELWOOD FROME
NATIONAL TELEPHONES
FROME No 4
PRIVATE EXCHANGE
LONDON
No 2109 CENTRAL

To

All users of Printing.

Dear Sirs,

TALKS ON PRINTING

No. 1. On Letterheadings and Stationery

Business men are realising the fact that letterheadings and stationery create a distinct impression on the minds of recipients. They find their letters have more effect if written on good paper, surmounted by an artistic heading, than if sent out on inferior paper with unsuitable headings.

And headings need not be expensive to be artistic. In many cases a tasteful design in letterpress in one colour is more effective than a design from line blocks in several colours. For this reason we do not believe in "stock" patterns for headings, however good they may be individually - we think each heading should be designed specially for the firm and business for which it is required.

We are prepared to design a heading free of charge for any firm applying to us, and to submit a rough sketch. If the same is approved we will make a finished drawing at a moderate charge according to the work involved (such charge only being made if no order is forthcoming), and send it, together with our estimate for printing the notepaper. At the same time we will advise on the class of paper we think most suitable for the design, and send samples.

In addition to noteheadings we print books, magazines, catalogues, booklets - in fact all forms of commercial literature, and we invite your enquiries for estimates and specimens of our work.

Yours faithfully,

BUTLER & TANNER.

TO BAKERS—Figs. 8 to 17 are GARDNER'S WELL-KNOWN PATENT "RAPID" FLOUR SIFTERS, and when so used are fitted with a Brush having a very gentle Sifting Action, (see Note 6, page 4). The size C is in use in all the leading Bakeries in the Kingdom, sifting by power at the *rate of about a sack per minute*.

WM. GARDNER & SONS (GLOUCESTER) LTD. ENGINEERS &c. GLOUCESTER

SUTTON'S COMPOUND CREAM OF AMMONIA

IN YOUR MORNING BATH.
REMOVES THAT TIRED FEELING.

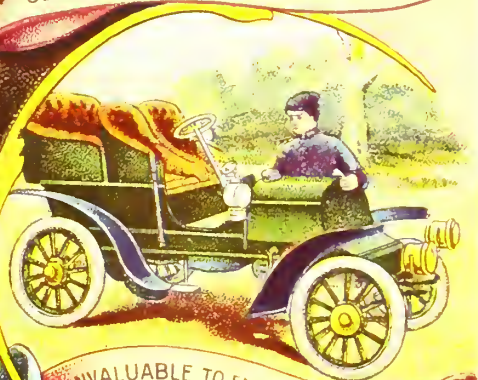




CLEANSES CULINARY UTENSILS & PLATE.

ANS & RESTORES COLOUR TO THE CARPET





TRY IT IN YOUR BATH

INVALUABLE TO ENGINEERS & MOTORISTS FOR REMOVING OIL AND GREASE



, DETERGENT, INVALUABLE
THE SICK ROOM & HOSPITAL

HAS NO EQUAL FOR REMOVING
GREASE SPOTS FROM CLOTHING

R LAUNDRY PURPOSES. SOFTENS HARD WATER.

MAKES LINEN WHITE & WOOLLEN GOODS SOFT

" F	" 16 16	" F	" 19 0	"							
" G	" 23 0	" G	" 26 10	" G	28 0	SIFTERS entirely depends on material and mesh of sieve used.		" F ..	22 10
								" G ..	31 0

TO BAKERS—Figs. 8 to 17 are **GARDNER'S WELL-KNOWN PATENT "RAPID" FLOUR SIFTERS,** and when so used are fitted with a Brush having a very gentle Sifting Action, (see Note 6, page 4). The size C is in use in all the leading Bakeries in the Kingdom, sifting by power at the *rate of about a sack per minute.*

WM. GARDNER & SONS (GLOUCESTER) LTD., ENGINEERS &c. GLOUCESTER

Sutton's Compound Cream of Ammonia

THE IDEAL CLEANSER.

IN YOUR MORNING BATH a small quantity overcomes that tired feeling. Invigorat and tones you for the day.

IN THE HOME, cleanses and restores the colours of carpets, is unexcelled for cleani paint, china, glass, mirrors, jewellery, plate, earthenware, saucepans, &c., &c. Does scratch nor injure but leaves everything quite fresh and bright.

IN THE LAUNDRY, softens the hardest water **INSTANTLY,** cleanses linen, flannel a all woollen goods. Restores black clothes and rusty silk, boys' jackets and girls' blou cleansed without fading, removes fruit stains, grease spots, &c.

IN THE GARDEN a few drops sprinkled will rid you of ants, beetles and other insec while a little rubbed on insect bites and stings allays the pain and swelling.

IN THE SICK ROOM a little sprayed is most welcome and refreshing to the patient.

Ask for **SUTTON'S** and refuse substitutes.

Crema de Amoniaco de Sutton.

COMPOSICIÓN IDEAL PARA LIMPIAR.

EN VUESTRO BAÑO de la mañana, una pequeña cantidad hace desaparecer t sensación de cansancio y os entona y da vigor durante el dia.

EN EL HOGAR DOMÉSTICO sirve para limpiar las alfombras restaurando sus tin no tiene rival para limpiar pintura, loza, cristal, espejos, joyas, objetos de plata y de ba batería de cocina, etc., etc.; no araña ni perjudica, sino que deja todos los obj perfectamente pulidos y brillantes.

EN EL LAVADERO hace dulce el agua más salobre **INSTANTANEAMENTE,** lav ropa de hilo, de algodón ó de lana; restaura vestidos negros y de seda a ajada; lir las chaquetas de los muchachos y las blusas de las muchachas sin estropearlas; quita manchas de fruta, grasa, etc.

EN EL JARDÍN unas cuantas gotas que se rocien harán desparecer las hormigas, es bajos y otros insectos, y un poquito que se unte sobre cualquier picadura de insecto el dolor y la hinchazón.

EN EL CUARTO DE UN ENFERMO, si se rocía una pequeña cantidad, ca una agradable sensación de frescura al paciente.

Pedid la Composición de **SUTTON** y rehusad toda substitución.

Prices, Samples and Bonus System
Particulars on application
supplied

Some of the numerous patterns of

ALL PREVIOUS LISTS CANCELLED — JUNE 1st, 1909

GARDNER'S PATENT "RAPID"

Sifters & Mixers

For Various Trades are here Illustrated, others Quoted for and Photos and Drawings sent on application, as we make many other types for which engravings are being prepared.

STANDARD PATTERN COMBINED MACHINES

(Figs. 1 to 4) will at one operation thoroughly Sift and Mix all dry powders, and reduce to powder and sift any that contain lumps, largely used for **Baking Powder, Self-raising Flour, Cattle Foods, Sugar, Colours, Sherbet, Coffee, Flour Blending,** and all kinds of blended powders. Fig. 4 is a Strong Heavy Machine for **Glass Makers' Batch.**

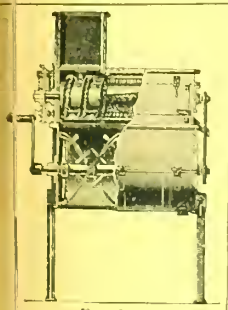


Fig. 1.

SIZES FOR HAND USE

Size	Holding capacity of Agitator about	PRICE
A	15 lbs.	£9
B	30 ,,	12
C	60 ,,	19
D	100 ,,	23

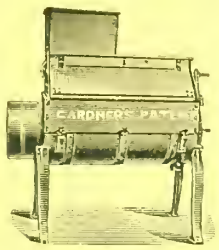


Fig. 2.

POWER SIZES WITH PULLEYS

Size	Holding capacity of Agitator about	PRICE
C	60 lbs.	£20 0
D	100 ,,	24 15
E	150 ,,	27 10

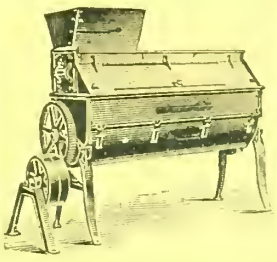


Fig. 3.

PULLEY AND GEAR DRIVE

the type recommended for Power users.

Size	Holding capacity of Agitator about	PRICE
D	100 lbs.	£27
E	150 ,,	30
F	200 ,,	35
G	300 ,,	45

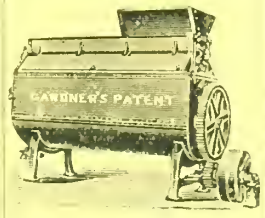


Fig. 4.

LARGE CAPACITY POWER-DRIVEN MACHINES

Size	Holding capacity of Agitator about	PRICE
H	5 cwt.	£77
I	10 ,,	—
J	20 ,,	—

CABINET PATTERN

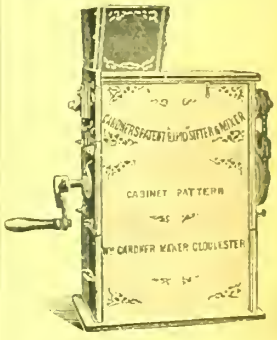


Fig. 5

For Counter use and small quantities. Will do the same work, and contains all the leading features of the Standard patterns

Made in two sizes only.

Size A. About 15 lbs. capacity. **£7 7**

Size B. About 30 lbs. capacity. **£9 9**

GARDNER'S PATENT "RAPID" SIFTER & MIXER WITH CRUSHER

(Fig. 6) breaks down large and hard lumps in **Sugar, Acids, Chicory, Salt, Colours, Soda,** small enough to be reduced, sifted and mixed afterwards.



Fig. 6

Size	Holding capacity of Agitator about	PRICE for Power
C	30 lbs.	£26 0
D	100 ,,	33 0
E	150 ,,	36 10
F	200 ,,	44 0
G	300 ,,	55 0

Gardner's Patent "Rapid" Sifter, Mixer & Essence Sprayer

(Fig. 7) for adding **Liquids, Essences, Flavourings, Liquid Colours, Oils, &c., to Sugar, Acids, Flour, Face Powders, Disinfectants, Seasonings,** and many kinds of Powders and Fruit Crystals **DURING MIXING.**



Fig. 7.

Size	Holding capacity of Agitator about	PRICE for Power
D	100 lbs.	£35 0
E	150 ,,	38 10
F	200 ,,	45 0
G	300 ,,	55 0

GARDNER'S PATENT "RAPID" SIFTERS

(Fig. 8 to 12) **(Power Sizes).** Sift any kind of Dry Powders, and reduce to powder any that may be lumpy, such as **Tartaric Acid, Bicarbonate of Soda, Magnesia, Arrowroot, Sugar, Flour, Colours, Sheep Dip, &c**



Fig. 8.

OPEN BOTTOM PATTERN

Size	Price
A	£5 5
B	7 0
C	10 10
D	13 10
E	15 0
F	16 10
G	23 0



Fig. 9.

HOPPER BOTTOM PATTERN

Size	Price
A	£6 0
B	8 0
C	11 10
D	15 0
E	17 0
F	19 0
G	26 10



Fig. 10.

WORM BOTTOM PATTERN

Size	Price
B	£9 0
C	13 10
D	18 0
E	19 10
F	21 0
G	28 0



Fig. 11.

LARGE CAPACITY WORM BOTTOM

Size	Price
H	£38 0
I	48 0

NOTE.—THE CAPACITY of SIFTERS entirely depends on material and mesh of sieve used.



Fig. 12.

IRON STAND PATTERN

Size	Price
B	£10 0
C	14 0
D	18 0
E	20 0
F	22 10
G	31 0

TO BAKERS—Figs. 8 to 17 are **GARDNER'S WELL-KNOWN PATENT "RAPID" FLOUR SIFTERS,** and when so used are fitted with a Brush having a very gentle Sifting Action, (see Note 6, page 4). The size C is in use in all the leading Bakeries in the Kingdom. sifting by power at the *rate of about a sack per minute.*

WM. GARDNER & SONS (GLOUCESTER) LTD. ENGINEERS &c. GLOUCESTER

GARDNER'S PATENT "RAPID" SIFTERS (Figs. 13 to 17). **Hand Sizes** for similar uses to Figs. 8 to 12. By means of these gears rapid Hand Sifting is obtained.

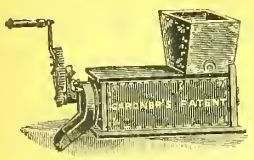


Fig. 13.

OPEN BOTTOM HAND GEAR

For Fitting on Box, Trough, or Bin.

Size B	...	Price £7 10
,, C	...	,, 10 10
,, D	...	,, 14 0

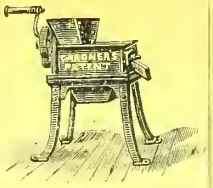


Fig. 14.

IRON STAND HAND GEAR

Size B	...Price	£10 0
,, C	,,	14 0
,, D	,,	18 0
,, E	,,	20 0

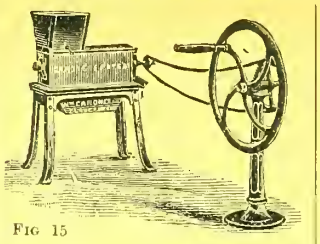


Fig 15

If desired, Sifters can be fitted with Pillar and Chain Drive, as above, in place of Hand Gear shown in Figs. 13 and 14. Price on application.

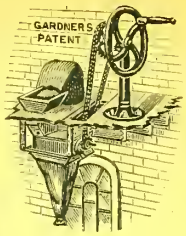


Fig. 16.

Pillar and Chain Driven Sifters

When space is limited, it is an advantage to hang Sifters under the floor, and this Patent Drive overcomes the difficulty. Fig. 16 shows the Sifter driven from above, and Fig. 17 below the floor.

		Open bottom pattern	Hopper bottom pattern
Price of Sifter, Pillar, Flywheel, and Chain.	Size B	£8 0	£9 0
	,, C	11 10	12 10



Fig. 17.

		Open bottom pattern	Hopper bottom pattern
Size D		£15 10	£17
,, E		17 0	19

GARDNER'S PATENT "RAPID" SIFTER, with CRUSHING ROLLS (Figs. 18 & 19) for similar work to that enumerated on Fig. 6. In place of the ordinary Regulating Feed Hopper in our other types, this Machine has Revolving Crushing Rolls, which seize and tear any hard large lumps formed in the powder to small pieces before passing into Sifting Chamber.

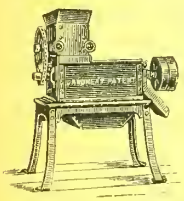


Fig. 18

Size	For Hand Use	With Pulleys For Power
C	£18 10	£19 0
D	22 0	23 0
E	—	25 10
F	—	28 0
G	—	39 10

Size	Price With Pulleys
C	£18 10
D	23 10
E	26 0
F	28 0
G	39 10
H	49 10
I	60 0



Fig. 19.

GARDNER'S PATENT "RAPID" MIXERS blend instantly, without loss by dust escaping (any number or colour of Powders), 1 oz. or less of one with lbs. or cwts. of others.

FLAT TOP PATTERNS (Figs. 20 to 22)

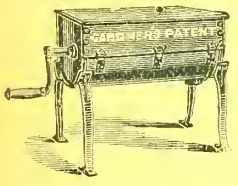


Fig. 20.

FOR HAND USE

Size	Agitator holds about	Price
A	15 lbs.	£5 5
B	30 ,,	6 15
C	60 ,,	10 10
D	100 ,,	13 10

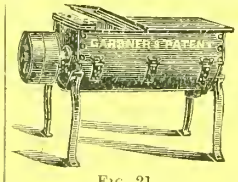


Fig. 21.

POWER SIZES, WITH PULLEYS

Size	Agitator holds about	Price
C	60 lbs.	£11 10
D	100 ,,	15 0
E	150 ,,	16 10

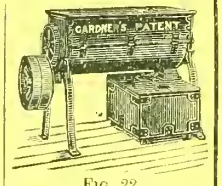


Fig. 22.

GEAR DRIVE, strongly recommended for power.

Size	Agitator holds about	Price
D	100 lbs.	£17 0
E	150 ,,	18 15
F	200 ,,	22 0
G	300 ,,	30 0

HOPPER TOP PATTERNS (Figs. 23 to 25.)

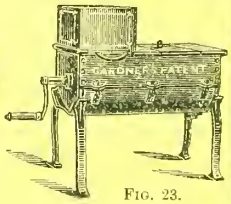


Fig. 23.

FOR HAND USE

Size	Agitator holds about	Price
B	30 lbs.	£8 0
C	60 ,,	12 0
D	100 ,,	15 10

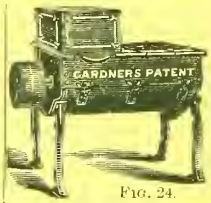


Fig. 24.

POWER SIZES, WITH PULLEYS

Size	Agitator holds about	Price
C	60 lbs.	£13 5
D	100 ,,	16 15
E	150	18 10

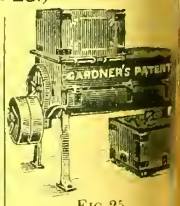


Fig 25.

GEAR DRIVE, stron recommended for po

Size	Agitator holds about	PR
D	100 lbs.	£19
E	150 ,,	21
F	200 ,,	24
G	300 ,,	32

NOTE.—The Dustless Box on wheels under Machines, Figs. 22 and 25 is not included in price quoted above, see illustration Fig. 32.

Large Capacity Power-Driven "Rapid" Mixers

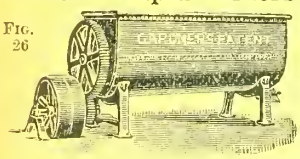


Fig. 26

For Cattle Foods. Flour, Meal, Poultry Food, Manures, &c.

Size	Agitator holds about	Price
H	5 cwt.	£44
I	10 ,,	88
J	20 ,,	—

Continuous "Rapid" Mixers.

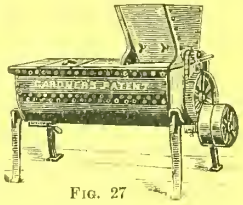


Fig. 27

Perfectly blends and automatically discharges Powders fed into it in continuous streams of any proportion

Size E...Price £26 10
Size F...£30; Size G...£38 10

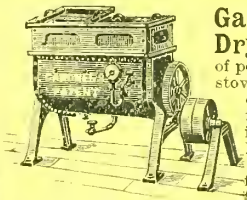


Fig. 28.

Gardner's Patent "Rapid" Dryer will dry moisture from all kinds of powder, and dispenses with drying-rooms, stoves, and other old-fashioned methods of drying and conditioning powders. All moisture is removed from most powders in **a few minutes.** Largely used by India-rubber manufacturers.

Fig. 28 represents a machine arranged for being heated by Steam, and of any temperature or pressure. Fig. 29 is for Gas Heating and Drying.



Fig. 29.

Size	Agitator holds about	Price
C	60 lbs.	£34
D	100 ,,	39
E	150 ,,	43
F	200 ,,	50
G	300 ,,	61
H	5 cwt.	83
I	10 ,,	

Size	Capacity	For Hand	For P
B	30 lbs.	£15 10	£16
C	60 ,,	24 0	25
D	100	—	32
E	150	—	37
F	200	—	43
G	300	—	54

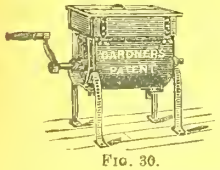


Fig. 30.

GARDNER'S PATENT "RAPID" LIQUID MIXER

For FURNITURE POLISH, PAINTS, CREAMS, OILS, THIN PASTES, &c. Can also be used for DRY POWDERS.

PRICES FROM £16 10s. to £40

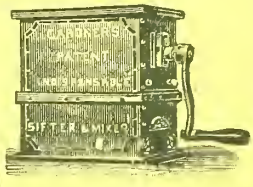


Fig. 31.

GARDNER'S INDISPENSABLE
For Small Users

Sifts and Mixes Powders only, but does not reduce lumps like our "Rapid" Patterns; useful for Samples, Sachet, Tooth and Face Powders, &c.

SIZE No. 1, capacity 7 lbs.
Price £2 15
SIZE No. 2, capacity 14 lbs.
Price £3 15

GARDNER'S DUSTLESS BOXES



Fig. 32.

to receive Powders Sifting or Mixing, fitted on Univer Wheels they are moved in any dire Prices from 25/- t Made to suit any s For method of see Figs 22 and

Our NEW PATENT STRAINER & MIXER for Liquids, Soups, Essences, &c., in any size, also EMULSIFIERS

WM. GARDNER & SONS (GLOUCESTER) LTD. ENGINEERS & GLOUCESTER

Mr. A. J. Gibson, Beaumont Granaries, Leyton, Essex, writes: "I am glad to say your Machines give good results."

GARDNER'S FEEDERS FOR MILLERS, BAKERS, FLOUR BLENDERS, &c. (Figs. 33 & 34)

having separate automatic Feed Gates by which the proportions of Powders, Colours, Meals, etc. can be varied at will. Will automatically Feed off any powders placed in the Hoppers.



Fig. 33

Size	Machine	Price
No. 1	Single, as Fig. 33	£3 15
,, 2	,, ,, ,,	7 0
,, 1	Double ,, 34	10 10
,, 2	,, ,, ,,	14 10
,, 1	Treble ,, 34	13 0
,, 2	,, ,, ,,	19 0



Fig. 34.

In the Double and Treble Machines a Worm Conveyor as shown in Fig. 34 is included.

GARDNER'S FEEDERS & "RAPID" SIFTERS

(Fig. 35) as used in the leading Bakeries, and Flour Stores. Blends various qualities of Flour, and while sifting same removes foreign matter, bag ties, dirt, insects, etc. from it.

Size	Machine	Price
No. 1	D'ble Feeder & Sifter	£25
,, 2	,, ,, ,,	33
,, 1	Treble ,, ,,	31
,, 2	,, ,, ,,	39

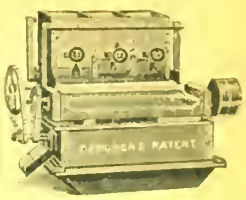


Fig. 35

NOTE—Applying to Figs. 33, 34 and 35. Each Hopper in No. 1 size will hold about one-third Sack of Flour, and each of the No. 2 about one Sack.

GARDNER'S "QUICK-CHANGE" (Fig. 36) and CENTRIFUGAL DRESSING MACHINES (Fig. 37)

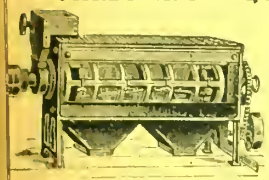


Fig. 36

For Sifting the Coarsest or Finest Grades of Ground Roots, Drugs, Chemicals, Chalk, Colours, Sugar, Dyes, Sulphur, Sand, Ochres, Flour, Charcoal, Cocoa, Blacklead, &c., &c., so arranged that various grades of powder may be produced at one time, and can be clothed with silk, brass, gun-metal or plated wire. The "Quick-Change" type has removable Barrel, so that many powders can be dressed on one Machine, as all parts are designed or quickly cleaning. Prices vary from £15 to £80, according to mesh or clothing used. The coarsest or finest grades of powder can be produced with these Machines. Very successful for Dressing Ground Spices following Disintegrators.

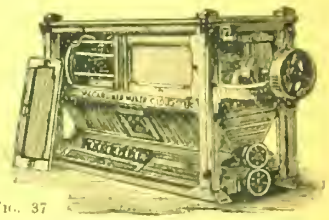


Fig. 37

Gardner's Patent Sugar and Crystal Grinding & Dressing Machine (Fig. 38).

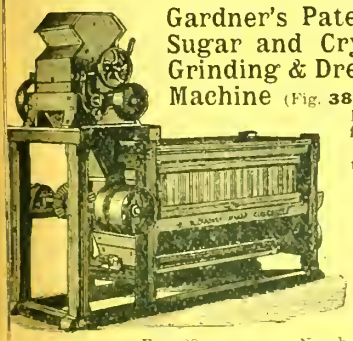


Fig. 38.

Produces from any Sugars the finest grades such as Icing, Castor, etc. Occupying small space and power. Numbers in use

Gardner's ROLLER GRINDING MILLS

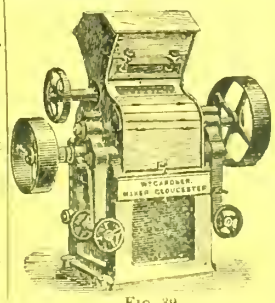


Fig. 39.

For Oats, Maize, Hemp and other Seeds, Acids, Charcoal, Cement, Crystals, Salt, Chemicals, Rotten Stone. Cattle Foods Biscuit Meals, Infants' Foods and almost all friable matter. Will grind finest grades, or crush or flatten only as desired.

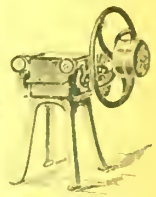
Also Small Sizes for Hand use.

GARDNER'S ADJUSTABLE CRUSHING & KIBBLING MILLS

(Fig. 40) Reduce to powder and small pieces lumpy Acids, Sugars, Colours, Biscuits, Shells, Soap Ingredients, Charcoal, etc.

Fig. 40.

Size	Machine	For Power
No. 1	6" wide in mouth	£12 0
,, 2	8" ,, ,,	14 10
,, 3	10" ,, ,,	17 10
,, 4	12" ,, ,,	22 0
No. 2H for hand use only		£15 0



GARDNER'S CRUSHING MILL

ARDNER'S REVOLVING REEL DRESSER (Fig. 41)

y gentle sifting action and recommended for gritty and sharp cutting owders, such as Emery, China Clay, round Flint, Pottery Chemicals nd removing dust from seeds, etc.

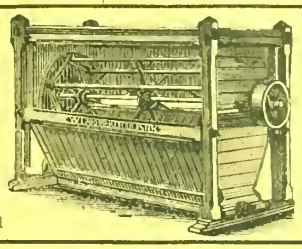


Fig. 41

GARDNER'S RECIPROCATING SIEVE SEPARATOR

(Fig. 42) For coarse powders, Seeds, Potteries, Flour Mills, etc., made to hang up to floor joists, or any suitable position.

Size	For Sieve Size About	Price
A	42in. by 18in.	£8
B	54in. by 20in.	9
C	66in. by 24in.	10

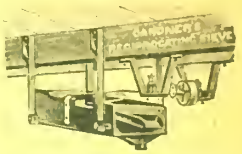


Fig. 42.

ARDNER'S POWER FRICTION HOISTS for Warehouses, Bakeries, etc. being self-contained only need to be bolted to floor or roof mbers, and can be worked from any floor, loads can be held in any position by means of brakes

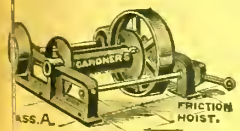


Fig. 43.

Class	No.	To Lift	Price
A	1	About 3 cwt.	£10 10
A	2	,, 5 ,,	14 0
B	3	,, 3 ,,	11 0
B	4	,, 5 ,,	14 10

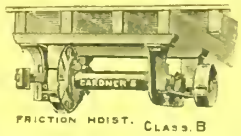


Fig. 44.

Gardner's Tanks for Measuring and Tempering Water for Bakeries.

Complete with Hot and Cold water taps, thermometer, water scale and glass, overflow pipe and stop cock can be made to place in any corner, and having hand-wheel valve supply can be kept under control while delivering into Dough Mixer.



Fig. 45

GARDNER'S PORTABLE STONE MILLS (Fig. 46)

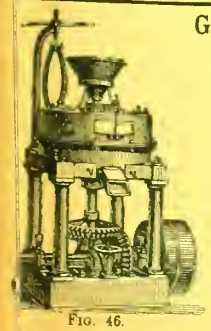


Fig. 46.

For Grinding Chemicals, Drugs, Blacklead, Crystals, Paints, Pepper, Cement, Corn, Coffee Husks, Rice, Sawdust, all kinds of Grain, etc.

PRICE PER MILL WITH ONE DRIVING PULLEY

Diameter of Stones	3 ft.	3 ft. 6 in.	4 ft.
French Runner and French Bedstone	£63	£74	£89
French Runner and Grey Bedstone	58	68	82
Grey Runner and Grey Bedstone	53	63	74

If two or more Mills are required to Form a Continuous Line, multiply the number by prices given to arrive at total cost.

Stone Crane £ extra. Loose Pulley if required, extra £

Every description of Millstone Dressing Tools for these supplied.

We often have good second hand Stone Mills in stock. Also second hand Millstones.

MILLSTONES (Fig. 47)

Either French, Derbyshire or Welsh. Of any diameter and for grinding every kind of material supplied.

We build stones to suit any requirement.



Fig. 47.

All Prices are quoted Carriage forward, but for Shipping Orders 7 per cent. must be added to any of the Prices here quoted to cover cost of Packing for voyage and delivering F.O.B. London

WM. GARDNER & SONS (GLOUCESTER) LTD. ENGINEERS & GLOUCESTER

MESSRS. SOUTHALL BROS. & BARCLAY, Manufacturing Chemists, Birmingham, write: "We are well pleased with the Sifters and Mixers, and find them fully answer our purpose."

GARDNER'S ..... PATENT ..... "RAPID" SIFTERS AND MIXERS

CONTAIN THE FOLLOWING IMPORTANT FEATURES:—

1.—Will break down and sift lumps formed in powders.

2.—Ingredients can be placed indiscriminately into the hopper without previous mixing.

3.—Practically dustless and noiseless in working.

4.—Brush being fitted in slide bearings can be regulated to greatest nicety.

5.—Foreign and other matter too large to pass through the sieve is automatically removed from sifting chamber by our patent overtail process, without injury to brush or sieve.

6.—Brush being interchangeable, Machines may be fitted with two classes: one to break down lumps to powder and sift, the other to sift only and pass lumps with foreign matter through patent overtail spout, only one of these, however, is supplied unless specially ordered and charged extra. *The latter type has the gentlest possible action, and will, if required, remove foreign matter, insects, lumps, &c., from flour, powders, &c., without the least injury to same.*

7.—A door being fitted over mixing chamber, the combined Machine, as illustrated above, can be used as a mixer only, if desired, without sifting, and essences or liquids can be added without injuring or choking brush or sieve.

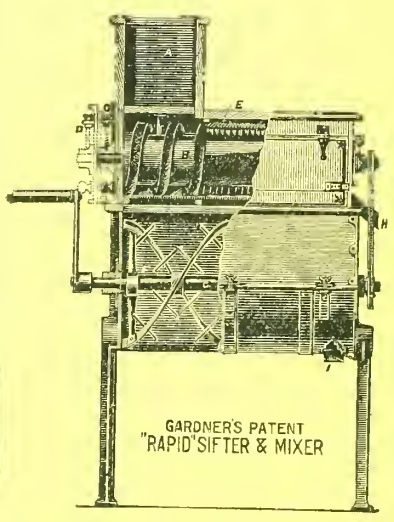
8.—Sieve being instantly removable any meshes can be used and extra sieves supplied if desired at an extra cost.

9.—Smallest possible wear and tear, and all bearings being outside, are lubricated with ease and without fear of lubricant coming in contact with the powders, as is the case with other mixing Machines.

10.—The Machines are quickly taken apart for cleaning, and as all sizes up to and including G have bottom of mixing chamber hinged, every part can be got at easily, so that when using one Machine for a great variety of powders there is no fear of one mixture contaminating that which follows.

Will Successfully Treat all kinds of POWDERED GOODS Such as:

BAKING POWDER
CUSTARD POWDER
TOOTH POWDER
SEIDLITZ POWDERS
CONDITION POWDERS
SHERBET, KALI
CEMENTS, OCHRES
CATTLE FOODS
INFANTS' FOODS
EGG POWDERS
MAGNESIA, BORAX
ICE CREAM POWDERS
TOILET POWDERS
INDIA-RUBBER Powders
SOAP POWDERS
STARCH POWDERS
BLUE, MANURES
SPICES, SUGAR
SELF-RAISING FLOUR
ICING SUGAR
CAKE FLOUR
LIQUORICE POWDERS
BLENDED FLOURS



GARDNER'S PATENT "RAPID" SIFTER & MIXER

FRONT SECTIONAL ELEVATION

FANCY FLOURS
CONFECTIONERY
PERFUMES
PLATE POWDERS
GRAVY SALT
DRY COLOURS
SAUSAGE SEASONINGS
SNUFF, PEPPER
MUSTARD, TABLE SALT
HEALTH SALTS
COCOA, SULPHUR
COFFEE, CHICORY
BLANC-MANGE Powders
GLASS BATCH
SAND, CLAY, EARTH
PIG POWDERS
SHEEP DIP
INK POWDERS
PUDDING POWDERS
FRUIT CRYSTALS
INSECT POWDERS
VERMIN POWDERS
AND SIMILAR KINDS OF POWDERS

References to **over 3,000** users in all parts of the world. Send samples of the powders you wish treated and most suitable Machine will be quoted for and complete Catalogue sent, by application to

Wm. GARDNER & SONS (GLOUCESTER) LTD.

Specialists in Sifting, Blending and Grinding Machinery

Telegrams: GARDNER, GLOUCESTER.
Nat. Telephone, No. 117
Codes used, A1 & A B C (4th & 5th Editions)

BRISTOL ROAD, GLOUCESTER

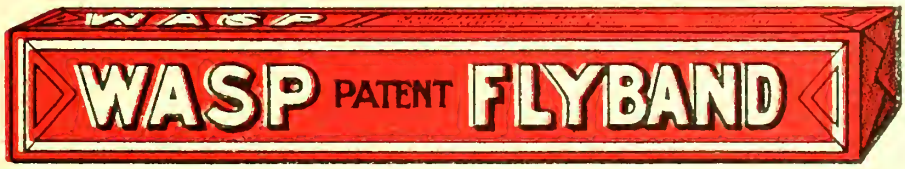
T. E. Carwardine & Co. Ltd., 138 Kingsland Rd., London, N.E., write: "The New Plant erected by you is working to our entire satisfaction."

The WASP Fly Band.

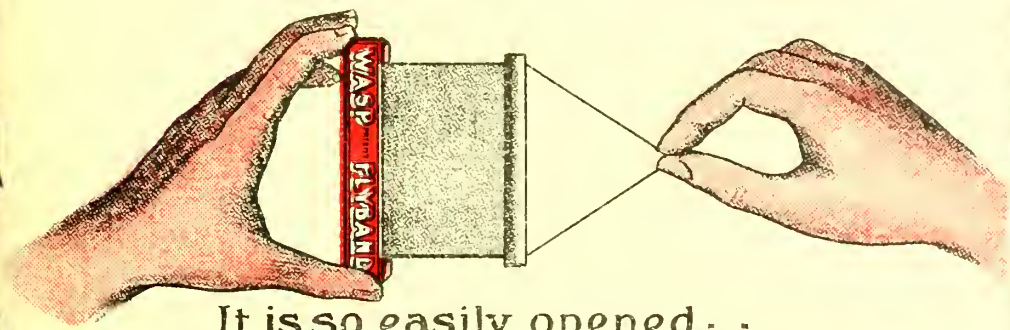


It is decidedly the best
of all fly-catchers
It is neatly & attractively
packed in an air-tight carton
which keeps the adhesive
moist & prevents leakage





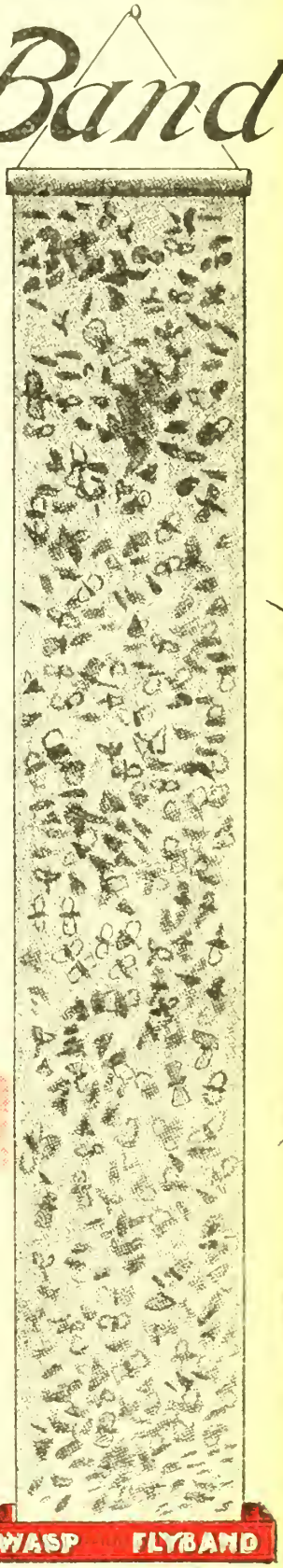
It is 26 ins. long by 4 ins. wide
This enormous catching
surface has made it the
favourite. It will catch
more flies and sell more
rapidly than any other
fly-catcher made





It is so easily opened
simply hold the box between
thumb & finger & pull the
string gently but firmly.
When extended the box
forms a perfect dripcatcher
No mess on the tablecloth
or the floor.





MANUFACTURERS:—
F W HAMPSHIRE & Co., RIVERSIDE WORKS, DERBY.

The very Lines for Chemists

SPRATT'S

BISCUITS

FOR SMALL AND MEDIUM BREEDS OF DOGS.

"OVALS" AND "MIDGETS"

In five kinds :—"Midget" FRUIT, "Midget" MALT & COD LIVER OIL, "Midget" MALT-MILK, "Midget" MEAT FIBRINE, and "Midget" CHARCOAL.

Chemists will find these foods sell themselves. In suitable packages for easy handling.

All Pharmacists at Home or Abroad are invited to write for Trade Prices of Spratt's Specialities.

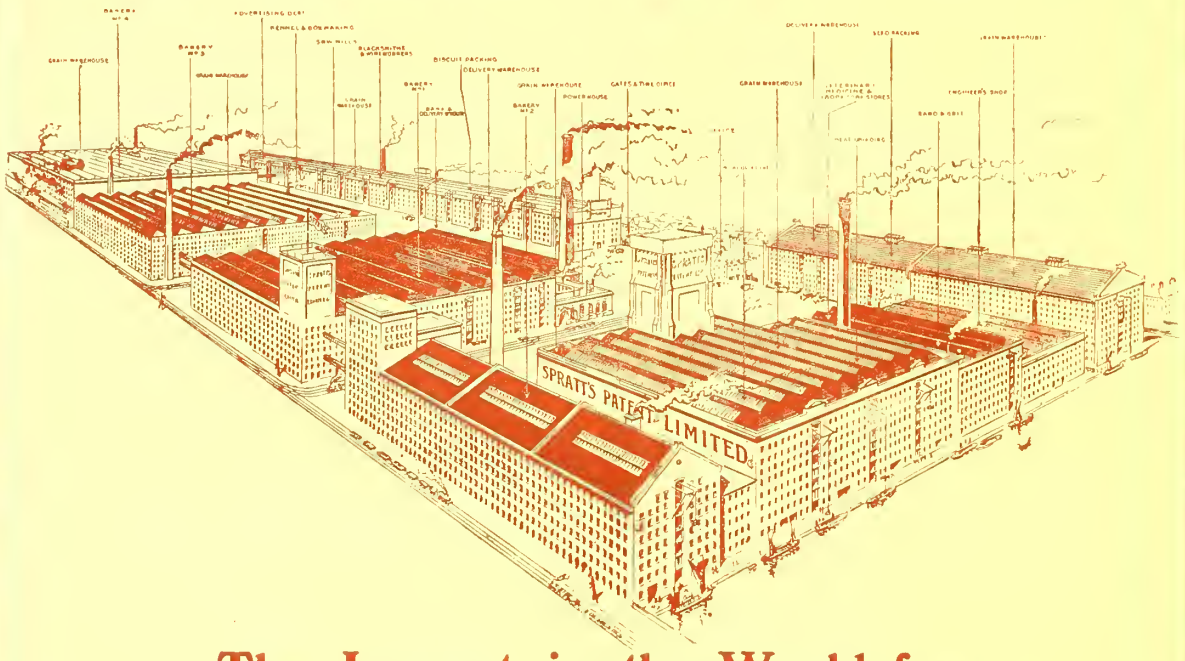
SPRATT'S PATENT LIMITED,
24 & 25, Fenchurch St., London, E.C.

ATTRACTIVE SHOWCARDS SUPPLIED.

The illustrations of Biscuits are exact sizes.



Spratt's Factory



The Largest in the World for Dog, Poultry, Game, and Cage Bird Foods.

NO better idea of the vastness of the business done by the famous firm of Spratt's Patent Limited, could be gained than from the plan of the factories at Poplar, which we reproduce above. It seems almost inconceivable that the concern, of the productive capacity of which this factory is the most eloquent witness, was started about half a century ago in a small shop in Holborn; that the many hundreds of articles now manufactured at Poplar emanate from the single scheme of the late Mr. James Spratt for the production of a nutritious dog biscuit; and that the small shop aforesaid has developed into sumptuous offices and showrooms in Fenchurch Street, others (for the Hearson Incubator) in Regent Street, branch offices and works in Canada and the States, Germany and Paris, even a sanatorium for dogs and birds at Beddington, Surrey. Yet so it is.

The patent for the famous biscuit was taken out by Mr. James Spratt in 1862. Eight years later the business was sold to Mr. Wylam and Partners. So rapid was its growth that in 1885 it was converted into a limited liability company. Since then it has further increased by leaps and bounds, thanks very largely to the vigorous initiative and management of Mr. Stephen Wingrove, the Managing Director, who has been connected with the firm almost from the first.

Something like five hundred different articles for dogs, cats, poultry, game, cage birds, etc., are turned out of the factory daily. For the accommodation of this colossal output the buildings contain over forty-five floors. The staff required to cope with this production might be dignified by the name of an army; besides these, of course, there are the clerical workers, of whose numerical strength some notion may be gained at the offices in Fenchurch Street, where expert organization of the highest quality is obvious in the compact arrangement of the premises and the distribution of a great number of employees over the necessarily limited space that a City establishment must have. And as with the staff, so with the machinery that performs the raising and lowering of material, the mixing of foods, the rolling out and stamping of biscuit dough, and its baking, at Poplar; as also the ingenious machines, large and small, that turn out the hundreds of articles that have become a necessity to all those who keep and house pets—canine, feathered, or otherwise. Spratt's have a wide range of articles especially suitable for handling by go-ahead chemists whom we would advise to put themselves into communication with this up-to-date Company.

Johnson, Riddle & Co., Ltd., London, S.E.

ARTHUR BERLINER

Telephones: LONDON WALL 507, CITY 998.

15 & 17 WORSHIP STREET,
AND
2a TABERNACLE STREET,

Telegrams: "RENILREB LONDON."

LONDON, E.C.

MANUFACTURER OF

SURGICAL DRESSINGS

AND

CHEMISTS' SUNDRIES.

TRADE MARK



BANDAGES,
COTTON WOOLS,
GAUZES,
LINTS,
GAUZE TISSUES,
PADS & SPONGES,
CELLULOSE,
WOOD WOOL,
ANIMAL WOOL,
SHEETINGS,
JACONETTES,
OIL SILKS,
BATISTS, etc.

On applying for
SAMPLES
and
QUOTATIONS
please state quantities required.

ESTABLISHED 1850.

BODY BELTS,
BATH GLOVES,
CORN PLASTERS,
SPONGE BAGS,
SUSPENSORIES,
SANITARY TOWELS,
HOT WATER BOTTLES,
TOOTH PASTES,
'507' DENTIFRICE,
TOILET POWDERS,
ENEMAS,
SPRAYS,
ICE BAGS, etc.

SURGICAL INSTRUMENTS AND NURSES' REQUISITES.

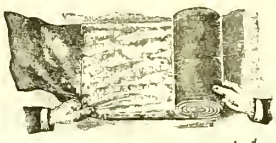
Illustrated Catalogue of Surgical Instruments, Aseptic Furniture, &c. on Application.



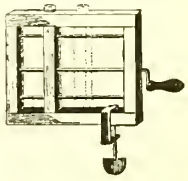
62. 2½INCH x 6 YARDS 2 6 DOZ
64 3 INCH x 6 YARDS. 3 0 "



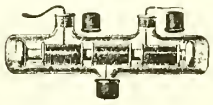
83 24 IN X 6 YDS WATER DRESSING BANDAGES . 15 0 GROSS



N° 1 ABSORBENT COTTON WOOL 1 0 PER lb
N° 2 " " " 9 "



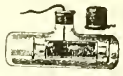
208 . . . . . 2 6 EACH



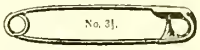
425 CATGUT OR SILK . . 24 0 DOZ



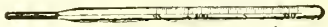
320. CATGUT OR SILK 20 0 DOZ



424 CATGUT OR SILK 12 0



219 . . . . . 3 0 GROSS



644 . . ORDINARY . . . . . 10 6 DOZ





1826 . . . . . 1 3 DOZ
1828 . . . . . 5 0 "



620 GLASS AND ENAMELLED IRON, SIX SIZES







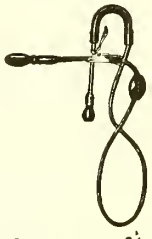
1806 . . . . . 3 9 DOZ
1802 . . . . . 3.0 "
1804 . . . . . 2.0 "



2005. . . . 3 6 EACH



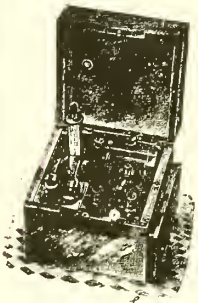
1966 . . . . 4 6 EACH



2276 . . . . . 26 0 DOZ



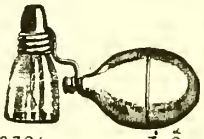
1922 . . . . . 7 6 DOZ



2135. . . . £2.0 0 EACH



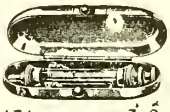
1928. . . . 8 9 DOZ



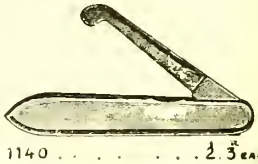
2704. . . . . 3 0 EACH



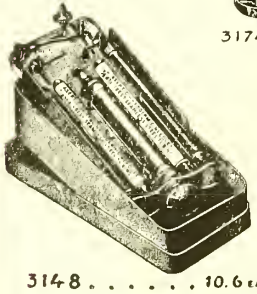
2260. BEST QUALITY 5 0 DOZ
2261 . 2ND QUALITY 3 0 "



3174. . . . 3 0 EACH



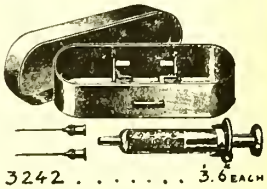
1140 . . . . . 2 3 EACH



3148. . . . . 10.6 EACH



3076 . . . . . 40. 0 SET



3242 . . . . . 3.6 EACH

A Special Trade Discount of 20 per cent. allowed off above prices.
India Rubber Goods subject to a market advance of 10 per cent.

JAMES L. HATRICK & CO., LIM.

Wholesale & Export Surgical Instrument Makers,

Trade
PHYSICIANS' AND SURGEONS' SUPPLIES
"STERILEX"
Mark.

70 St. John Street,
Clerkenwell Road,
LONDON, E.C.

Telephone No.: 10307 CENTRAL.
Telegraphic Address: "FORTALICE LONDON."
A B C Codes, 4th and 5th Edition used.

PHYSICIANS' & SURGEONS' SUPPLIES.

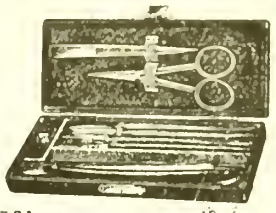
Illustrated Catalogue of Surgical Instruments, Aseptic Furniture, &c. on Application.



577 .....3. 0 PAIR



1094 ..... £1.7 6



721 ..... 12 6 EACH



1235. 5 INCH ..10. 6 DOZ
1236. 7 INCH . 15. 0 "



1184. 4 INCH 15 0 DOZ
1184. 5 INCH . 17 0 "



1256. 4½ INCH . . 12 0 DOZ



4420. 8 INCH 1 9 EACH
4422. 10 INCH. 2 3 EACH



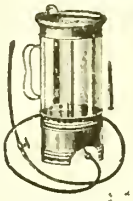
4470 10x8 INS 5 0 EACH



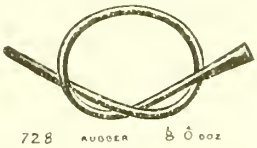
1223 . . . 13 0 DOZ
1222 STRAIGHT 10 0



1218 10 6 DOZ



3948. 2 PINT . 2 6 EACH
3952. 4 PINT . 3. 0 EACH



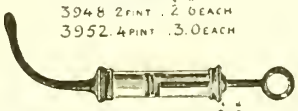
728 RUBBER 8 0 DOZ



4020 . . 6 . OZ



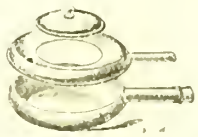
1224. . . . 3. 9 EACH



4296. 2 DRACHM . . . 8 0 DOZ
4292. 4 DRACHM . . . 10 6 "



1010 FEMALE 2 9 EACH
1005 MALE 2 6 EACH



4509 . . 5 0 EACH



3913. . . . . 3 0 EACH



3386. . . . 15 6 EACH



4397. . . 3 6 DOZ

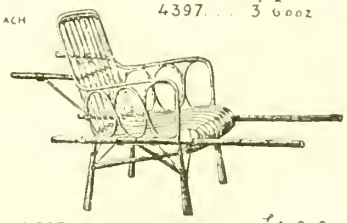


3298
3300 12 6 EACH
10. 3 "





6106. . . . 16 0 DOZ



5017 . . . . . £1.0 0

A Special Trade Discount of 20 per cent. allowed off above prices.
India Rubber Goods subject to a market advance of 10 per cent.

JAMES L. HATRICK & CO., LIM.

Wholesale & Export Surgical Instrument Makers,

Trade Mark. PHYSICIANS' AND SURGEONS' SUPPLIES STERILEX

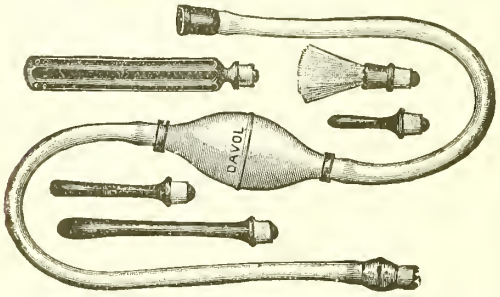
70 St. John Street,
Clerkenwell Road,
LONDON, E.C.

Telephone No. . 10307 CENTRAL
Telegraphic Address: "FORTALICE LONDON."
A B C Codes, 4th and 5th Edition used.

DAVOL'S

HOUSEHOLD SYRINGES.

Recommended by the Medical Fraternity.



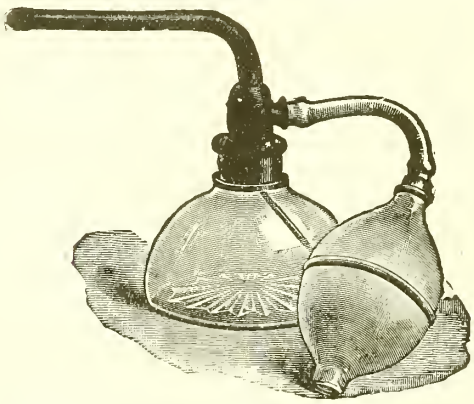
Made of Pure Rubber with Hard Rubber Pipes. Are conceded to be the best, cleanest, and most perfect Syringes on the market, as they have no screw threads or washers to get out of order and thus become defective; nor any metal fittings to become corroded, and which are so dangerous in use.

The Valves are secured and cannot be lost, therefore ensuring efficiency at all times.

DAVOL'S

MAGIC ATOMIZERS.

CONTINUOUS SPRAY.



For the Toilet; also for Throat and Nasal Applications, and employment in the Arts. **Made with Metal and Hard Rubber Tubes.** Are unequalled for Quality, Efficiency, and Durability, great care being taken in their manufacture to have a first-class instrument in every respect.

We Manufacture a Complete Line of FOUNTAIN and BULB SYRINGES in the various grades,

AND

Fine Rubber Goods Generally

For the Druggists' & Surgical Trade.

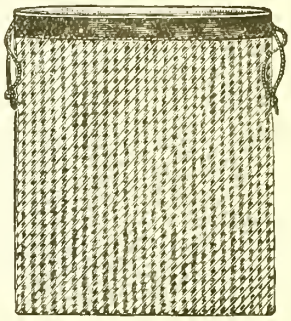
DAVOL RUBBER CO.

PROVIDENCE, R.I., U.S.A.,

Also 17 CHARTERHOUSE BUILDINGS, GOSWELL ROAD, LONDON,

WRITE FOR NEW ILLUSTRATED CATALOGUE.

TOOGOOD'S SPONGE BAGS.



SUPER QUALITY CHECK.

Nos.	1	2	3	4	5	6	7	8	
	5/6	6/6	8/3	10/3	11/3	14/-	18/-	20/-	doz.

SPECIAL QUALITY CHECK.

Nos.	1	2	3	4	5	6	7	8	
	4/-	4/6	5/6	6/9	8/-	10/-	12/-	14/-	doz.

No. 2140. DICE CHECK.

Nos.	1	2	3	4	5	6	
	4/-	4/6	5/3	6/6	7/-	9/-	doz.

THE "CLIMAX."

Proofed on both sides.

Nos.	1	2	3	4	5	6	7	8	
	8/6	10/-	12/-	15/-	18/-	20/-	23/-	26/-	doz.

SPONGE WRAPPERS.

SUPER QUALITY CHECK.

Without Pocket.

18 × 18	20 × 20	22 × 22	24 × 24	
15/-	18/-	20/-	23/-	doz.

SUPER QUALITY CHECK.

With Pocket.

18 × 18	20 × 20	22 × 22	24 × 24	
18/-	21/-	24/-	27/-	doz.

THE "CLIMAX."

Proofed on both sides. Without Pocket.

20 × 20	22 × 22	24 × 24	
24/-	29/-	33/-	doz.

THE "CLIMAX."

Proofed on both sides. With Pocket.

20 × 20	22 × 22	24 × 24	
28/-	34/-	40/-	doz.

Above Prices are subject to 7½ per cent. 1 month.

WILLIAM TOOGOOD, LTD.

77 SOUTHWARK STREET, LONDON, S.E.

A. DE ST. DALMAS & CO.

Contractors to His Majesty's Government.

LEICESTER.

(Established 1823.)

— MANUFACTURERS OF —

MEDICAL PLASTERS

Spread Plasters. Adhesive, Belladonna, Soap Cerate, Roborans, Fleshcolour Adhesive, &c.

Hospital Strapping. On Holland, Pure Stout Calico, &c.

Porous Plasters. All kinds. On Cotton Cloth, Red Felt, White Kid, &c.

Rubber Adhesive Plaster. On Cotton Cloth or Holland—In Tins or on Spools.

Court Plasters, Toothache Plasters, Corn and Bunion Plasters, Mustard Leaves, &c.

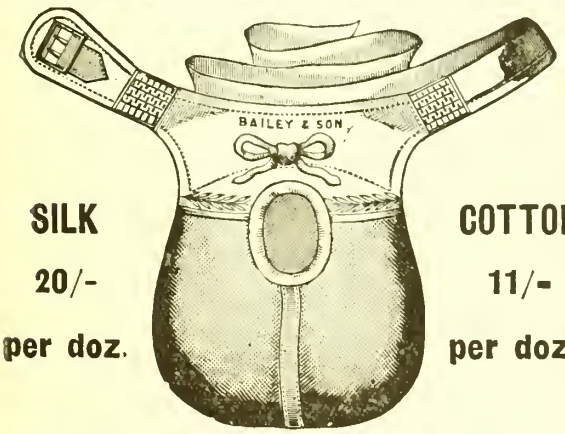
SURGICAL BANDAGES

Waterdressing, Fastedge, Calico, and Flannel Bandages, Elastic Web, Crepe Velpeau, and Plaster of Paris Bandages.

THE LEICESTER "VARICO" LEG BANDAGE.

TRADE MARK.

BAILEY'S "A.B.C." SUSPENSORIES.



SILK 20/- per doz.

COTTON 11/- per doz.

Assorted—A, small; B, medium; C, large bags.

W. H. BAILEY & SON,

38 OXFORD STREET, LONDON. W. [3]

VERNON & CO. LTD.

Penwortham Mills, PRESTON,

MANUFACTURERS OF

ABSORBENT LINTS.
COTTON WOOLS.
GAUZE TISSUE,
SANITARY TOWELS, &c.

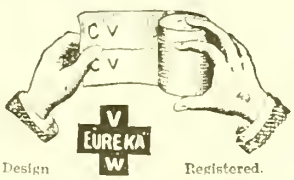
We spin the yarns from the raw material, weave the cloth, bleach, raise and finish on our own premises

Every Genuine Bandage must have "Eureka" on Wrapper.

VINCENT WOOD'S NEW FAST EDGE "Eureka" Crêpe Velpeau Bandages.

RUBBERLESS, Porous and WASHABLE.

Special discount for quantities.



Name and Design Registered.

SOLE IMPORTER for Gt Britain and Colonies.

Wholesale from all Sundries Houses.

THE BANDAGE OF THE FUTURE

in cases of Varicose Veins, Sprains or Abdominal Binding, &c.
NO OTHER will be worn or asked for.

Prices per doz. Bandages. Widths: 2 2½ 3 3½ 4 11 ins.

Best Quality	12/-	15/-	18/-	30/-	54/-	
2nd ,, ...	9/-	12/-	15/-			

Send for Price List of Trusses Belts, Hot Water Bottles, Elastic Stockings, Sponge Bags, Bathing Caps, &c.

4 ALBION PLACE, Blackfriars Bridge, LONDON, S.E.

Customers can have their own names on Wrappers and Circulars.

POULTICES SUPERSEDED by using

Spongio Piline

(THE ORIGINAL "MARKWICKS").

Beware of imitations made from inferior materials now being offered to the Trade.

The advantages are greater comfort and retention of ***warmth*** and ***moisture.*** ***It can be washed and re-used as often as required,*** and obviates all the trouble of the old mode of poulticing and fomenting.

DIRECTIONS.—Simply soak it in the Water or Lotion, and apply the moist Spongy surface.

IMPERMEABLE PILINE

For Rheumatism, Promoting Perspiration, and for the application of Stimulating Liniments.

ANTISEPTIC, WATER AND SPIRIT PROOF. Reduction in price.

Manufactured only by R. R. WHITEHEAD & BROS., Ltd., 10 Endell Street, London, W.C.

Telephone—No. 9116 CENTRAL. Telegraph Address—"WANDFELT LONDON."

To be obtained from all Wholesale Houses. Enquiries should be marked "Desk G."

NEWSOME'S LINTS & BANDAGES.

The Superior Quality of this Lint is admitted.

The VD Quality is quite pure, and of great superficial area and exquisite softness. The C, D, E, and F qualities are equally pure and absorbent.
Also other qualities for hospital use. XW and FF.

CHARLES NEWSOME, 18 **London Road, MANCHESTER.**

PROPRIETORS, BENJAMIN LEES & CO., LTD.

Bleached and Unbleached Bandages, in Open Wove, Calico, Domette, Flannel, and Muslin, from 1-in. to 18-in. wide.

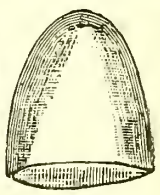
Specially Bleached and Unbleached Abs. Cotton Wool, Plain and Interleaved.

Also Abs. Wool and Gauze, Tow, &c.

NATIONAL TELEPHONE No. 921. TELEGRAMS: "BANDAGES MANCHESTER."

RENDELL'S

SOLUBLE QUININE PESSARIES.



THE WORLD-WIDE REPUTATION that these Pessaries have obtained since their invention by **W. J. Rendell** in 1885 has induced unscrupulous persons to place upon the market worthless and injurious compounds, with colourable imitations of W. J. Rendell's labels. To distinguish the genuine Pessaries from these fraudulent concoctions, see that the Registered Trade Mark and Number, in ***RED INK,*** are upon each box thus:

Registered Trade Mark, without which none are genuine. No. 182,688.

W. J. Rendell No. 182,688

Registered also in Australia, India, The Cape, The Argentine, Germany, &c.

IMPORTANT NOTICE AND CAUTION.

Several injunctions in the High Court of Justice having already been obtained (reports of which have appeared in "THE CHEMIST AND DRUGGIST"), W. J. RENDELL'S SOLICITORS are instructed to take proceedings against all persons (Makers or Vendors) fraudulently using the name of "W. J RENDELL," "RENDELL," or any colourable imitation thereof in connection with Pessaries NOT manufactured by

W. J. RENDELL,

INVENTOR AND SOLE MAKER,

15 CHADWELL STREET, CLERKENWELL, LONDON, E.C.

Established 1850.

FOR FIFTY-NINE YEARS

we have been manufacturing rubber goods of every description. But our long- anding experience is allied to modern, up-to-date methods. We therefore claim to be able to serve you with the highest quality goods, on thoroughly modern lines, at the keenest of prices.

You will now be stocking

HOT-WATER BOTTLES;

ours are thoroughly reliable, modern in shape, and are supplied in all sizes in light and heavy qualities.

¶ The "Vanoric" Registered pattern will interest you. It is vulcanised in a special way so as to withstand the hardest wear.

¶ The square shoulders of the old-fashioned type have been rounded off, so that, when emptied, the water runs clean away, none being left in the shoulders to rot the canvas.

OUR CURRENT PRICE List of India Rubber Goods of every description for Chemists and Druggists forwarded on application. We invite correspondence.

THE HUTCHINSON COMPANY

INDIA RUBBER MANUFACTURERS,

70 Basinghall Street, LONDON, E.C.

Telephone: 3265 WALL.

Telegrams: "HUTCHINSON LONDON."

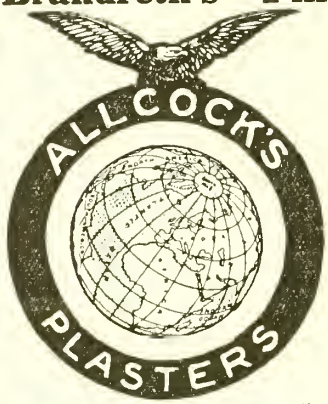
The Original and only Genuine

Allcock's

POROUS **PLASTERS**

A REMEDY OF 60 YEARS' STANDING.

Allcock's Plasters
Allcock's Corn and Bunion Plasters
Brandreth's Pills
} *The Three Reliables.*



A HANDSOME SHOWCARD will be sent free of cost and post paid on application.

ALLCOCK . . MANUFACTURING COMPANY . .
22 Hamilton Sq., Birkenhead.

"Sold all round the World."

Elastic, Rubberless, Washable, Hygienic, Fast Edges, Cool, Light, Porous.

CRÊPE BANDAGES.

SUPERIOR ENGLISH MANUFACTURE.

From 3/9 doz. In all widths and qualities. Manufactured by—
THE NORWICH CRÊPE CO. (1856) Ltd., St. Augustines, NORWICH.
Samples Free. Special Terms for Quantities.

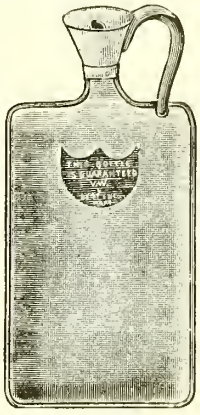
VINCENT WOOD

gained the only **GOLD MEDAL**





at the recent **FRANCO-BRITISH EXHIBITION**



— for —

Trusses. Abdominal & Supporting Belts
Hand Woven and Spiral Elastic Hosiery
Sponge Bags, &c.
Hot Water Bottles and Covers
Suspensory Bandages
Elastic Web Bandages
Chest Expanding Braces
Enemas and Surgical Appliances generally

Sole Agent for the "EUREKA" CRÊPE VELPEAU BANDAGES.

SEND FOR LIST.

NO ADVANCE IN PRICES.

4 Albion Place, BLACKFRIARS BRIDGE,
Telephone 2113 Hop, **LONDON, S.E.** Freehold Works, Carlton, NOTTINGHAM.

TO WHOLESALE BUYERS AND SHIPPING MERCHANTS ONLY.

Hand or Machine Made. To suit all Climates. Absolute Purity of Contents. Best Finish.



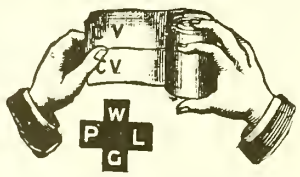
Capsules TYE'S & Perles

JOHN TYE & SON, *Manufacturing Chemists,* Packington Street, LONDON, N.



The New Fast Edge.

CREPE VELPEAU BANDAGES



Trade Mark. Registered.

THE ONLY ORIGINAL
Introduced by
W. GIMBER in 1892.

AN ELASTIC BANDAGE.
Containing no Indiarubber.
Superseding Elastic Stockings, Webs, Bandages, and at half the cost. Three sizes—about 2, 2½, and 3½ inches wide.

CREPE VELPEAU ABDOMINAL BINDERS.
Useful after many Abdominal Operations, and for ladies after confinements. Two sizes—8 and 11 in. wide.
CAUTION.—Beware of fraudulent and useless imitations, and reject all Bandages not bearing the above Trade Marks on the Wrappers. Wholesale of the original Importers and Introducers.

W. GIMBER & SON, Surgical Bandage and Instrument Makers,
44 QUEEN'S ROAD, PECKHAM, LONDON, S.E.
And of all Wholesale Druggists, Chemists, Surgical-instrument Makers, &c.
Telephone: 2401 Hop. Descriptive Circular and Price List on application.



Aluminium Respirator "Z" & Goggles.

For Safety Appliances of all descriptions apply to:



Valve Respirator.

ZIMMER & CO., 82 Mark Lane, London, E.C.

"Vulnoplast"

(PATENTED).

An Antiseptic Dressing with self-adhesive edges. Is always ready for use, and does not require :: :: bandages or pins :: ::

The most complete and convenient

Surgical Dressing.

It is treated with various antiseptics, and supplied in several widths.



Manufactured by

The Liverpool Lint Co.,

MARK STREET MILL,

LIVERPOOL.

DON'T WEAR A TRUSS

FREE TRIAL



STUART'S PLASTER-PADS are different from the painful truss, and being self-adhesive they hold the rupture in place without straps, buckles or springs—cannot slip, so cannot chafe or compress against the pelvic bone. The pads contain a wonderful medicine which is kept constantly in contact, thereby curing the most obstinate cases. Thousands have successfully treated themselves without hindrance from work and in the privacy of the home. Soft as velvet—easy to apply—inexpensive. Write to-day and "Trial Treatment," with interesting book, will be sent free.—Address:—

STUART PLASTER-PAD CO. Dept. Q 66-67 Shoe Lane, E.C.

ESTAB. 1871. CONTRACTORS TO WAR OFFICE, ETC.

CORKS FOR CHEMISTS.

We are the ONLY CORK FIRM that makes a speciality of

RETAIL CHEMISTS' CORKS.

FINEST QUALITY SELECTED BOTTLE & PHIAL CORKS AT LOWEST PRICES EVER OFFERED.

WRITE FOR FREE SAMPLES & PRICE LIST.

N. W. Mitchell & Sons, Ltd

BOUCHON WKS., 15-17 FARRANCE ST., LIMEHOUSE, LONDON, E.

Telephone Number: 3365 (3 lines), London Wall.

H. POTHS & CO.,

26 & 27 FARRINGDON STREET, LONDON, E.C.

SHOP BOTTLES AND JARS WITH VITRIFIED LABELS, SHOW BOTTLES,

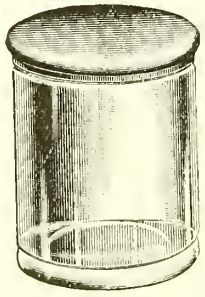
Perfume, Screw-capped, and Medical Bottles of all kinds, Graduated Measures, Druggists' Sundries.

Illustrated Catalogues free.



Telephone: 2278 Central. Telegrams: "FECHER LONDON."

The Right House for Ointment Pots of all kinds



Ointment Pots of Glass,
Ointment Pots of Porcelain,
Ointment Pots of Earthenware,
for Cold Cream, Eczema, Lanoline, Toilet Creams, etc.

IS

M. J. FECHER, 1 Mallow Street, Old Street, LONDON, E.C.

Wholesale Dealers and Manufacturers only supplied.

E. BREFFIT & CO., LTD.

The Aire & Calder Glass Bottle Works.

ESTABLISHED 1834

WINCHESTERS.

CARBOYS

POISONS,

AND ALL KINDS OF

BOTTLES

SUITABLE FOR

WHOLESALE AND MANUFACTURING CHEMISTS

LONDON OFFICE:

83 UPPER THAMES STREET, E.C.

Telephone: BANK 843.
Telegrams: "BREFFITS LONDON."

LONDON WAREHOUSES:

SOUTH WEST INDIA DOCK, E.

Telephone: EAST 1487.

WORKS:

CASTLEFORD, YORKSHIRE.

Telephone: CASTLEFORD 2.
Telegrams: "BREFFITS CASTLEFORD."

I. Isaacs & Co.

GLASS BOTTLE MANUFACTURERS,

106 MIDLAND ROAD, ST. PANCRAS, LONDON, N.W.

We return our best thanks to the Trade for all past favours, and wish to inform them that we have now advertised in "The Chemist & Druggist" for 50 years. Here is a copy of an advertisement in that paper dated September 15, 1859 (now 50 years ago):—

Glass Bottles and Phials of the best manufacture at the North London Glass Bottle Works,

ISAACS & SON, PROPRIETORS,

London Warehouses,—24 and 25, Francis Street, Tottenham Court Road, W.C.

LIST OF PRICES.

NEW GLASS BOTTLES, any shape, plain or graduated, clear blue tinted.

3 and 4 oz. ..... 7*s.* per gross.	10 and 12 oz. ..... 13*s.* per gross.
6 and 8 oz. ..... 8*s.* „	16 oz. ..... 15*s.* „

IMPROVED FLINT GLASS BOTTLES WITH PHIAL LIP, any shape, plain or graduated, clear blue tinted.

3 and 4 oz. ..... 9*s.* 6*d.* per gross.	10 and 12 oz. ..... 16*s.* per gross.
6 and 8 oz. ..... 10*s.* 0*d.* „	16 oz. ..... 18*s.* „

CLEAR WHITE MOULDED PHIALS, best quality.

½ oz. & under 4*s.* 6*d.* per gross.	1½ oz. .... 6*s.* per gross.	3 oz. ..... 9*s.* per gross.
1 oz. ..... 5*s.* 6*d.* „	2 oz. ..... 7*s.* „	4 oz. ..... 10*s.* „

Immediate attention to country orders. No charge for package. Delivered free within 7 miles. Terms, remittance on receipt of goods. Post Office Orders to be made payable to ISAACS & SON, at Tottenham Court Road. Bankers, Unity Bank, Western Branch.

ESTABLISHED 70 YEARS.

and here is also our present advertisement.

DISPENSING BOTTLES AND PHIALS.

I. ISAACS & CO., Glass Bottle Manufacturers,

106 Midland Road, St. Pancras, London, N.W.

Beg to call attention to their REDUCED PRICES.

We make the New Shape, Oval Fronted Bottles. No extra charge.

FIRST QUALITY

3 & 4	6 & 8	12	16 ounce.	
9/-	**10/-**	**15/-**	**20/-** per gross	Round edges, plain or graduated, quinine tinted.

SECOND QUALITY.

3 & 4	6 & 8	12	16 ounce.	
7/6	**8/6**	**12/-**	**18/-** per gross	Round edges, plain or graduated, clear blue tinted

PANEL BOTTLES (reduced prices)

2	3	4	6	8 ounce
7/6	**8/-**	**8/-**	**9/-**	**10/-** per gross.

WHITE PHIALS—GOOD QUALITY

½	1	1½	2 ounce	
3/6	**4/-**	**4/6**	**5/6** per gross	Plain or teaspoons.

Six gross and upwards, assorted or otherwise, sent carriage paid to any address in the United Kingdom. Smaller quantities not carriage paid.

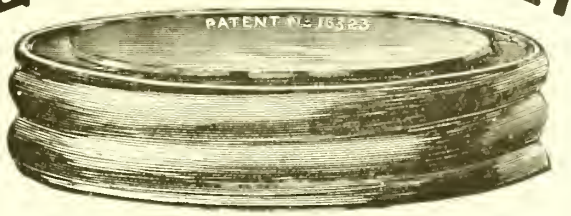
Established 120 years. Bankers: London and Westminster Bank.

It will be noticed that prices have not altered much in that time. We supply the best bottles at lowest prices, and hope for a continuance of your commands.

Telegraphic Address:
"FISH LONDON."
ABC Code,
4th & 5th Edition.

Telephone Number:
5924 HOLBORN
(3 lines).

JOHNSEN & JORGENSEN, Ld.



Our Patent
Screw-capped
Up-to-date

MALT JARS

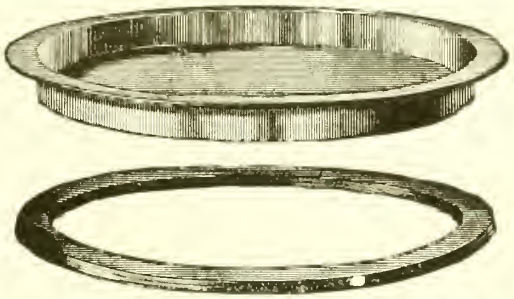
Round & Square.

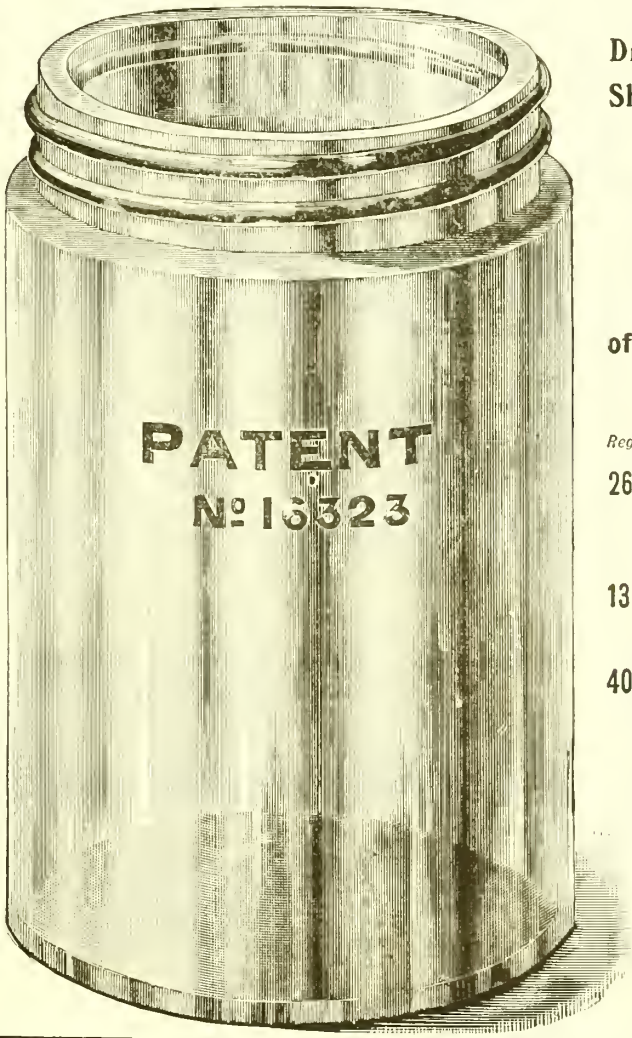
All sizes in Best Amber & White Flint Glass are now being used by all the Leading Houses.

LARGE STOCKS ALWAYS ON HAND TO MEET IMMEDIATE DEMANDS.

SAMPLES & PRICES ON APPLICATION.

ILLUSTRATED CATALOGUES FREE.





Also Manufacturers
— OF —
Medicals,
Perfume Bottles,
Screw-capped Pomades,
Show Glasses,
Druggists' Sundries
Shop Bottles & Jars
— WITH —
Vitrified Labels.

BOTTLES

of every description.

Registered Offices & Showrooms:

26-27 FARRINGDON ST.,
LONDON, E.C.

And at—

13 WEST CAMPBELL ST.,
CLASGOW.

406 CORN EXCHANGE BDGS.
MANCHESTER.

Also at—

LEEDS & BELFAST.

American Patent for this closure for sale.

GLASS BOTTLES.

The attention of BUYERS is invited to our

AERATED WATER BOTTLES

CODDS, SCREW AND SWING STOPPERS
CORK AND CROWN CORK MOUTHS

which we are constantly manufacturing in large quantities. They are strong, well blown, and most satisfactory in use.

. . . ALSO WE RECOMMEND OUR . . .

WINCHESTERS — In Pale Green, Blue, and Amber Colours. Many sizes. Plain and ground stoppered.

KILNER POISONS — Our well-known make. Attractive style. All useful sizes. In Blue and Amber Colours.

DISPENSING — All shapes. Many sizes and graduations. In nice light Blue Tint.

MACHINE AND HAND-MADE BOTTLES

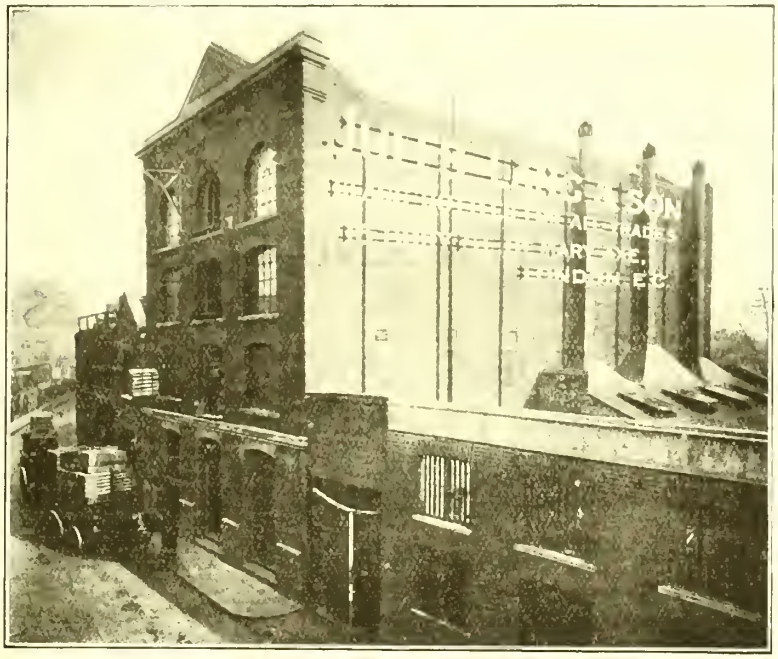
For Fruit, Jelly, Jam, Marmalade, Sweets, Soup, Pickles, Sauces, Milk, &c.

Our Illustrated Catalogue is handsomely got up and very useful to Buyers of Bottles. Copy sent on Application.

KILNER BROTHERS, Ltd.

No. 3 G.N. Goods Station, KING'S CROSS, LONDON.

We Stock for You



Your buyer can arrange to see goods in bulk before delivery if you wish. Let us know your requirements.

HERE'S THE WAREHOUSE!

Which is situated in Bermondsey.

Let us quote on your samples — we are doing a large trade owing to our low prices.



THESE are a few of THE THINGS WE STOCK.



OPAL Mexicans, Panels and Pomades now ready.

Lozenge and Cachou Jars, Perfume Bottles, Cannons, Kalis, Glycerines, Lemon Crystals, Limes, Medicals, Ovals, Panels, Flats, Pomades, Tobins, Vials, Eau de Cologne, Eau de Quinine, &c., &c.









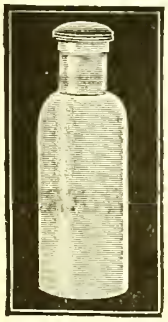
Jules Lang & Son,

16 Bury Street, St. Mary Axe,

Dept. B. ***LONDON, E.C.***

Nat. Telephone: Avenue (2 lines) 1675.
Tel. Add.: "ASSORTED LONDON."
Code in use: A B C, 5th Edition.

ESTABLISHED 1858.



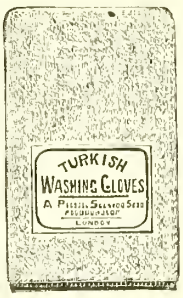




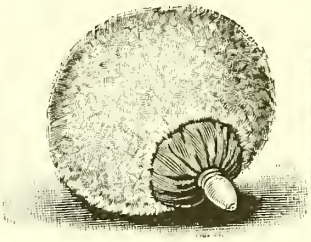


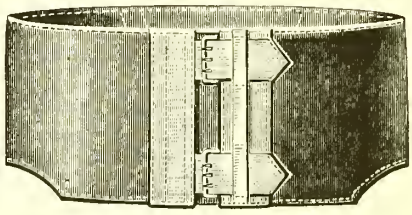


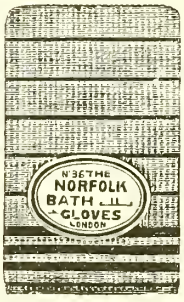


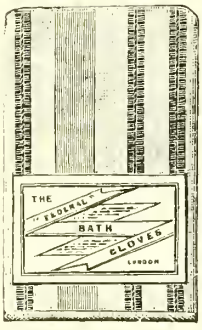


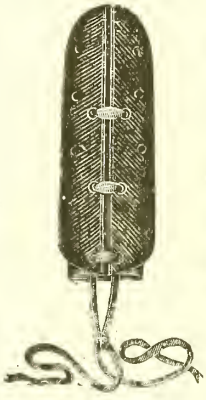


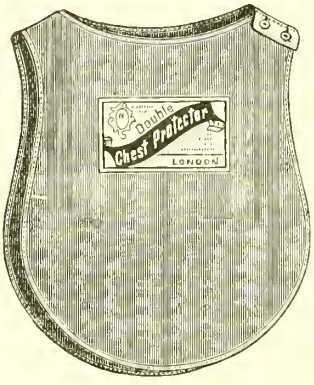














BATH AND FLESH GLOVES.
CORN AND BUNION PLASTERS.
CHEST PROTECTORS.
BODY BELTS.
POWDER PUFFS.
FACE CHAMOIS.
FINGER STALLS.
EYE SHADES.
VACCINATION SHIELDS.
COURT PLASTER AND GOLD BEATERS' SKIN.
LOOFAHS.

&c., &c., &c.

Solport Bros.,

WHOLESALE & EXPORT MANUFACTURERS.

188-190 GOSWELL ROAD, LONDON, E.C.

Write for Copy of 1909 Price List.



NEW!

THE PEOPLE'S FLYCATCHER.

Started late last season, nevertheless became THE Selling Flycatcher.

NO DRYING UP.

SEE WHAT A LEEK CUSTOMER SAYS:

It's a nervous time introducing a new article. Last year we stocked three kinds of Flycatcher. This year we are only stocking yours. They are beginning to catch on. Customers are coming again for them, and all speak very highly of them when we ask them how they liked them. To-day a country woman said the one she had last week had caught hundreds of Flies, and she had two more. Dated June 15th, 1909.

Ask for Free sample and quotation from patentee

C. FROWEIN, 43 BASINGHALL ST., LONDON, E.C.

P.S.—It will pay you to see my sample before ordering elsewhere.

The 'VAMPIRE' and the 'FLYSAC.'



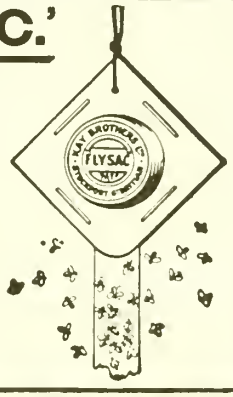
Send for samples. They carry our argument. Both annihilate flies, and both are hermetically sealed. With them there is no leakage, no risk, and no delay. The "VAMPIRE" sells on account of the novelty of its construction, the "FLYSAC" on account of its economy in use.

Prompt Deliveries. Big Profits. Quick Returns.

SOLE MAKERS:

KAY BROS. Ltd., STOCKPORT.

30 years' experience in the manufacture of Bird-limes and Flygums.



THE

"SILVER"

LIXOL

FLY CATCHERS.

(Patent and Registered).

The Latest and Best.

Send for Samples.

They Will Convince You.

A Neat and Handy Contrivance.

Easy to Open.

Pull the String, That's All!

Order through your Wholesaler—If he doesn't stock, send us a postcard and we will arrange.

Sole Makers: DEANSMERE MANUFACTURING CO.,
Works: HIGH STREET, STOCKPORT England.



The **ORIGINAL** and by far the **BEST** Sticky Fly Paper in the Market.

THE "FLY CEMETERY."

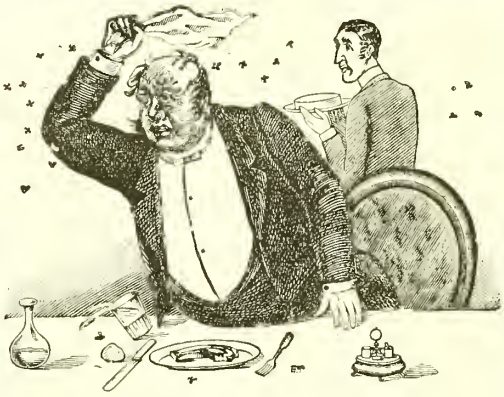
BEWARE OF SPURIOUS IMITATIONS.

Catches more flies in a day than the old-fashioned Papers do in a week.

PER GROSS **5/-** PER GROSS

Carriage Paid.

Cash with Order.



Retail Price—ONE PENNY.

Well known in every Household in the Kingdom.

BEARS LARGE PROFIT.

PER GROSS **5/-** PER GROSS

Carriage Paid.

Cash with Order.

TUNBRIDGE & WRIGHT'S

"Cemetery" Fly Tape

To meet the demand for a Fly Catching Device (which under some conditions is more convenient than a Fly Paper), we have produced the "Cemetery" Fly Tape, which is strongly made and most efficacious.



Price:

6/6

Per Gross, net.
Cash with Order.
Carriage Paid.

Manufacturers—TUNBRIDGE & WRIGHT, READING.

London Depot: 12 LITTLE BRITAIN, E.C.

North of England Depot: 4 Gallowgate, Newcastle-on-Tyne. *Telegrams: "Flies Reading."*



DR. MACKENZIE'S

Catarrh Cure

SMELLING BOTTLE

Dealers in Patent Medicines should always stock

"MACKENZIE'S CURE."

It is well got up, sells at sight, bears a large profit, and wherever introduced has a rapid sale, giving satisfaction to both buyer and seller.

Sent out in Fancy Cardboard Boxes containing half a dozen bottles.

PRICE ONE SHILLING.

May be obtained from all Wholesale Patent Medicine Warehouses.

Showcards and Handbills from

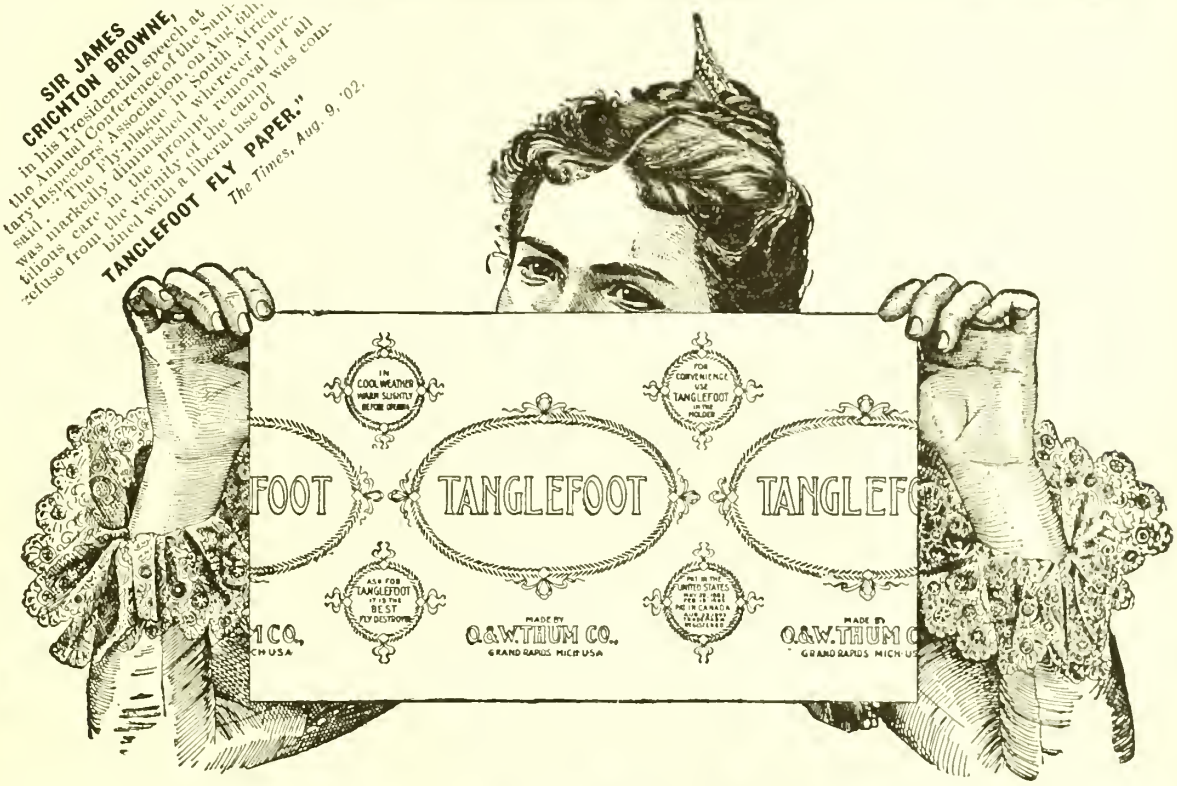
MACKENZIE'S CURE DEPOT, READING, ENGLAND.

SIR JAMES CRICHTON BROWNE,

in his Presidential speech at the Annual Conference of the Sanitary Inspectors' Association, on Aug. 6th, said: "The Fly-plague in South Africa was markedly diminished wherever punctilious care in the prompt removal of all refuse from the vicinity of the camps was combined with a liberal use of

TANGLEFOOT FLY PAPER."

The Times, Aug. 9, '02.



THIS IS AN ILLUSTRATION OF A SHEET OF

TANGLEFOOT

SEALED, STICKY, **FLY PAPER.** NON-POISONOUS.

Every Sheet Hermetically Sealed.

50 Sheets, like above, in a Cardboard Box. 10 Boxes in a Case.

EXPORT—10 Cases are securely packed in a strong crate for Export. Apply for Export Prices.

PRICES—

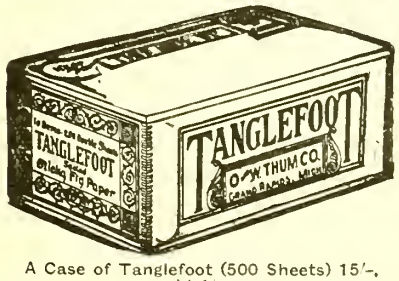
1 Case (containing 10 Boxes) .... 15/-, car. paid 1/- extra.

5 per cent. Reduction on 5-case orders.

PARCEL POST PACKET OF 150 SHEETS FOR 5/-

Sole Importers—**ALABASTINE CO. (British), LIM.**

Church St., SOUTH LAMBETH, LONDON, S.W.

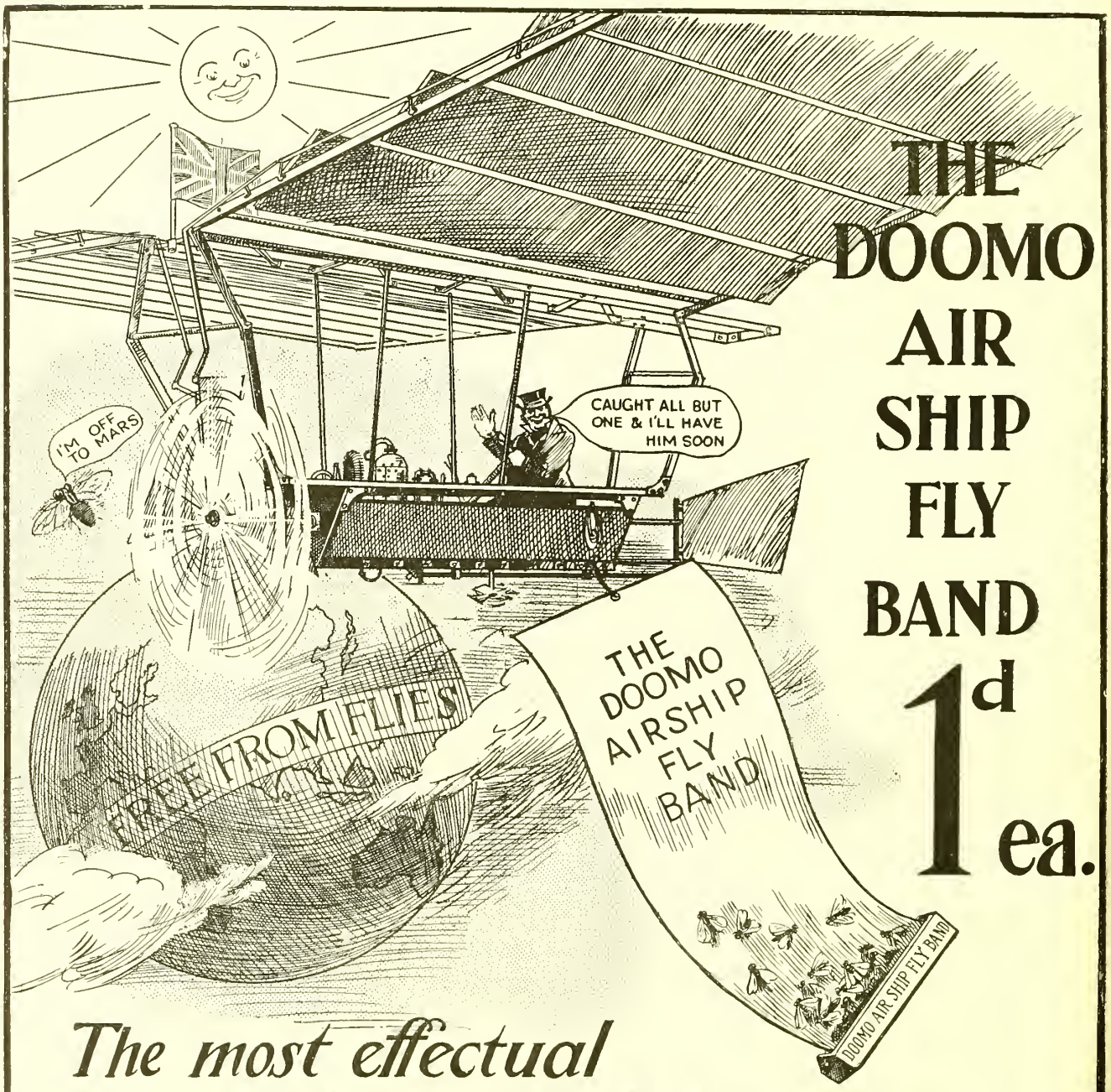


A Case of Tanglefoot (500 Sheets) 15/-, car. paid 1/- extra.

AND OF ALL CHEMISTS' SUNDRIESMEN.



150 Sheets per Parcel Post for 5/-



THE DOOMO AIR SHIP FLY BAND 1d ea.

The most effectual

FLY DESTROYER in the world.

A wide band, sticky on both sides, unrolling like a window blind. Will catch ten times more flies than an ordinary tape.
Being sticky on both sides, it has a catching surface equal to a fly-paper. **6s. 6d.** gross, post paid on receipt of P.O.

Proprietors of Flyodoomo, Doomotape, &c.
Telegrams: "Smith Chemist Newark."

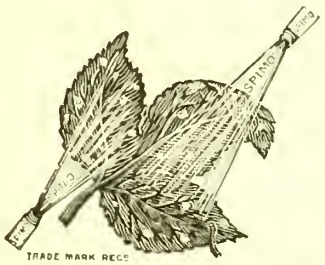
JNO. H. SMITH & CO., NEWARK-ON-TRENT.

THE.. APHIS **INVASION.** GARDEN LOVERS . . . can easily and cheaply secure **PROTECTION**

by using

"ABOL" WHITE'S SUPERIOR INSECTICIDE,

the Best Plant Wash for garden and greenhouse.



KILLS APHIS, MILDEW, CATERPILLARS, &c.

MAKES PLANTS HEALTHY. INVALUABLE TO ROSE GROWERS.

NON-POISONOUS.

½-Pints, 1/-; Pints, 1/6; Quarts, 2/6: ½-Galls., 4/-; Galls., 7/6.

IN CONJUNCTION WITH

"ABOL" Syringe.

THE PERFECT SPRAYER.



PRICES: 8/6, 10/6, 14/6. By post 4d. extra.

"A" BENDS 1/6.

Unsolicited Opinions:
"GRAND SUCCESS."
"FINEST ON THE MARKET."
"A PERFECT SYRINGE."
"MORE THAN SATISFIED."
"DELIGHTED."
And 100's of others.

May be had through all Seedsmen, Florists, Chemists, and Ironmongers. Full particulars post free from the Sole Proprietors and Manufacturers—

E. A. WHITE, Ltd., Hop and Fruit Growers, Paddock Wood, KENT.



HORSE BALLS

Gelatine or Transparent coated, Oval or Oblong.

Alterative, Cough, Cordial, Fever, Grease, Tonic and Diuretic. **16** per dozen net, in boxes of 3, 6, or 12.

PHYSIC BALLS from **16** to **29** doz.

THE WAND MANUFACTURING CO.

21 WELLINGTON ST., LEICESTER.

NAT. TEL. 1145. TEL. ADDRESS: "QUERCUS."



Seldom See

a big knee like this, but your horse may have a bunch or bruise on his Ankle, Hock, Stifle, Knee or Throat.

ABSORBINE (YOUNG'S)

will clean them off without laying the horse up. **No blister, no hair gone.** $3 per bottle, delivered. **Book 8D free. ABSORBINE Jr.,** for human use, 4/6. Removes Painful Swellings, Enlarged Glands, Goitre, Wens, Bruises, Varicose Veins, Varicosities, Old Sores. Allays pain. Book free. Genuine in Lithographed Tin Can. Manufactured only by

W. F. YOUNG, P.D.F., Springfield Mass., U.S.A.

Advertisements like the above are appearing in all the important farm and stock papers throughout the United Kingdom. Many chemists carry the goods in stock. This is bound to create a constant and ever-increasing demand for the remedy. Inquiries from your section referred to you. If you have not already advised us that you carry ABSORBINE in stock, do so immediately, so that your name will surely appear on our reference list.

Sole Agents for the United Kingdom: THOS. CHRISTY & CO., 4-12 Old Swan Lane, LONDON, E.C.

SANKYO & CO.

. . IMPORTERS OF . .

CHEMICALS, DRUGS, AND SURGICAL INSTRUMENTS,

MUROMACHI 3-CHOME, TOKYO, JAPAN.

SANKYO & CO. are the largest Wholesale Druggists in Japan, and will undertake the introduction of new chemicals, preparations, selected Toilet Articles, and Surgical Instruments for Manufacturers desiring to sell their goods in Japan.

Send samples, literature and price lists in any language to the above address.

東京市日本橋區室町三丁目拾番地

三共合資會社

By Appointment to H.M. the King.



Official Reports show that routine disinfection with

Jeyes' Special Fluid — Cyllin —

banishes school epidemics, and thereby greatly increases school grants.

With a view to the prevention of infectious disease the Bucks Education Committee had the floors of 25 schools sprinkled nightly during the past twelve months with a solution of Jeyes' Special Fluid, the attendance in these schools being compared with that of the remaining schools in which the process was omitted.

The official report shows an improved attendance in the disinfected schools sufficient to earn additional grants amounting to over £50, while the entire cost of disinfection for the twelve months was less than £30.

NOTE.—Jeyes' are the only disinfectants supplied by Royal Warrant to His Majesty the King.

Particulars of the most efficient method of Disinfecting Schools can be obtained free on application to

Jeyes' Sanitary Compounds Co., Ltd., 64 Cannon St., London, E.C.

HARVEY'S HORSE REMEDIES



P.A.T.A. PROTECTED PRICES.

HARVEY'S Aconite Powders,
For Chronic Cough, Broken Wind, Roaring, &c.

HARVEY'S Worm and Condition Powders.

HARVEY'S (Watts') Embrocation,
or Curb Bottle.

HARVEY'S (Watts') Red Lotion,
For Wounds.

HARVEY'S Hair Restoring Ointment.

HARVEY'S Edos, or Tasteless Purging Powder.

These Remedies are used in most of the Training Stables, Stables of Masters of Hounds, and by many thousands of the Best Private Horse Owners in the United Kingdom and abroad.

Chemists are invited to write for particulars of our Successful System of Local Advertising. Many Chemists with a connection among better-class Horse Owners are now adopting it, with gratifying results.

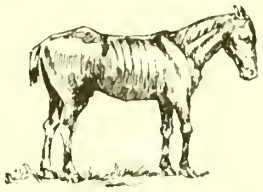
GENEROUS PROFITS SECURED.

For Trade Prices see the Lists of the Wholesale Houses, or write for Cash Price List to the Sole Proprietors,

HARVEY & CO. (DUBLIN) LIM.

Wholesale Offices:
49 Lower Gardiner St.,
DUBLIN.
ESTABLISHED 1859.

Telegraphic Address—"REMEDIES DUBLIN."



Before a course of
John's Condition Powder.

"EQUINOPULV"
Regd. Trade Mark.

JOHN'S



After a course of
John's Condition Powder.

CONDITION POWDER

The Ideal Medicine for keeping Horses in perfect Condition.

USED LARGELY BY H.M. CAVALRY REGIMENTS TRAINERS & STUD FARMS.

JUDGE THE ARTICLE FROM THE FOLLOWING UNSOLICITED CERTIFICATES.

(Originals may be seen as below.)

7½ Thayer Street, Manchester Square, W.
6th April, 1909.

Messrs. A. JOHN & Co.,
54 Piccadilly, London, W.

Dear Sirs,—I have great pleasure in testifying to the results of your "Equinopulv" Condition Powder for Horses, which I have found to be extremely useful in restoring to their normal health animals that have got out of sorts and generally run down.

I tested this preparation on a horse in my stables which was very much out of condition, and was gratified to find that a marked improvement was shown within two or three days, while in ten days a complete cure was effected, and the horse perfectly fit again and ready for any amount of hard work.

I am pleased to have had your Powder brought to my notice, and you are at liberty to use this testimonial in any manner you may think fit.

Yours faithfully,
(signed) ERNEST FOWNES.

..... Barracks,
21st January, 1909.

Sir,—I beg to inform you that I have given a twelve year old gelding a tin as directed by you with most satisfactory results. This animal was thoroughly run down on the last Autumn Manœuvres. He belonged to the Earl of ....'s Squadron, who saw him to-day and was very pleased with the marked improvement. I gave him your card, as His Lordship wishes to give your powder a trial. I am now using the other tin you so kindly left and I hope to have the same satisfactory results.

I beg to remain,
Your obedient servant,
Corpl.-Major Farrier,
Royal Horse Guards.

H. C. JOHN, Esq.,
54 Piccadilly,
London, W

(This squadron has since taken several dozen tins.)

Bears a good profit and is well advertised.

THE SOLE REPRESENTATION

for this great Indian Remedy in each important town in Great Britain, the Colonies, and on the Continent of Europe is offered to Chemists. :: Correspondence invited.

WHOLESALE AGENCY

H. C. JOHN, 54 PICCADILLY, LONDON, W.

SPECIAL "IALINE" FLUID

DISINFECTANT

The Special "Ialine" Fluid has been submitted to H.M. OFFICE OF WORKS, and APPROVED AS A SATISFACTORY DISINFECTANT, after being tested by the special method included in the Official scheme of examination.

MANUFACTURERS OF VARIOUS DISINFECTANT FLUIDS WITH GUARANTEED CO-EFFICIENCIES UP TO 17.0 (B. TYPHOSUS TEST, RIDEAL-WALKER METHOD).

LIQUID SHEEP DIP

Approved for Sheep Scab by the BOARD OF AGRICULTURE AND FISHERIES, and DEPARTMENT OF AGRICULTURE AND TECHNICAL INSTRUCTION FOR IRELAND, in the proportion of One Gallon of Dip to Seventy Gallons of Water.

WEED KILLER. SULPHUR CANDLES. LIQUID SANITARY SOAP. NAPHTHALINE, in Various Forms. FORMALDEHYDE SOLUTION 40%, and TABLETS. PINE SANITARY FLUIDS, POWDERS, SOLUBLE BLOCKS, &c., &c., &c.

SPECIAL ARRANGEMENTS MADE WITH COUNTRY CHEMISTS.
FULL PARTICULARS ON APPLICATION TO

BURT, BOULTON & HAYWOOD, LIMITED.

OFFICES: 64 CANNON STREET, LONDON, E.C.
CHEMICAL WORKS: PRINCE REGENT'S WORKS, SILVERTOWN, LONDON, E.
Agent for Ireland: H. FitzGerald Campbell, 5 Greenmount Road, Terenure, Dublin.

DANYSZ VIRUS

KILLS

RATS and MICE

HARMLESS TO HUMAN BEINGS, DOMESTIC AND OTHER ANIMALS, BIRDS, &c.

Has been issued for the last fifteen years under the superintendence of Dr. Danysz, Director of the Laboratory of Micro-Biology at the Pasteur Institute, Paris.

Dr. Danysz writes:—"My virus for rats and mice has, up to the present date, caused no accident, nor injury to the health of man, and my long experience enables me to say, and to affirm, that my microbe is not dangerous to human beings."

THE ONLY VIRUS ON THE PROTECTED LIST.

Obtainable through all the Wholesale Houses.

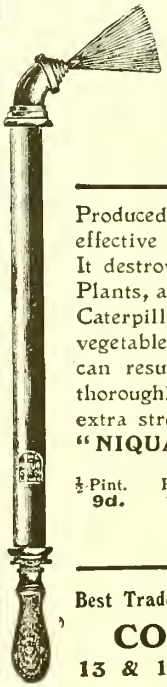
Circulars, Handbills, Showcards, etc., on application to—

Danysz Virus, Ltd., 52 LEADENHALL STREET, London, E.C.

GREAT ATTACK OF BLIGHT THROUGHOUT THE COUNTRY.

"NIQUAS"

(REGISTERED)



The Cheapest and Most Successful

NON-POISONOUS INSECTICIDE

of the day.

Produced from vegetable extracts, forming a most effective Insecticide for Syringing and Dipping. It destroys all Insect Pests infesting Trees and Plants, and for the total destruction of Aphis and Caterpillars, that are so destructive to garden vegetables, while no possible injury to vegetation can result from its use. Red Spider can be thoroughly eradicated by using **"NIQUAS"** at extra strength. For economy in use apply with **"NIQUAS" Syringe**, as illustrated.

½-Pint.	Pint.	Quart.	½-Gallon.	Gallon.	5 Gallons.
9d.	1/-	1/9	3/-	5/-	22/6

10 Gallons. 42/6 — 20 Gallons. 80/-

Best Trade Terms on application to

CORRY & CO., Limited,
13 & 15 FINSBURY ST., LONDON, E.C.



OAKEY'S WELLINGTON KNIFE POLISH.

GOLD MEDAL LONDON. 1884

THE ORIGINAL & ONLY GENUINE PREPARATION.

PREPARED EXPRESSLY FOR OAKEY'S KNIFE BOARDS,

All Patent Knife Cleaning Machines, and Rubber and Buff Leather Knife Boards.

Knives constantly cleaned with it have a brilliant polish equal to new cutlery, and are not injured as they are when common imitations of Oakey's Knife Polish or when Bath Brick is used.

Canisters, 1d., 2d., 3d., 6d., 1s., 2s. 6d., 4s. each.

Oakey's "Wellington" Knife Boards.

The best and cheapest articles ever introduced to the Public, for expeditiously and brilliantly polishing Knives. Made in all sizes. Oakey's "Wellington" Knife Polish should be used with the boards.

Oakey's "Wellington" Silversmiths' Soap.

The best and cheapest article for cleaning and polishing, without waste or dirt, Silver, Electro-Plate, Britannia Metal, Tin, Zinc, Plate Glass, Marble, Gas Globes, Lustres, Windows, &c. Tablets, 6d. each.

Oakey's "Wellington" Black Lead.

Imparts an immediate, brilliant, and lasting polish to all kinds of Stoves, Ironwork, &c. No WASTE, DIRT, or DUST in the use—adheres at once to the stove. Solid Blocks, 1d., 2d., and 4d. each, and 1s. Boxes.

Oakey's "Nelson" Black Lead.

In Circular Polished Blocks, ½d. and 1d. each; packed also in fancy boxes at 6d. each, containing 1 doz. ½*d.* blocks or ½ doz. 1*d.* blocks.

Oakey's "Polybrilliant" Metal Pomade.

(REGISTERED.)

A magic Pomade for cleaning Brass, Copper, Tin, Pewter, Britannia Metal, &c. Never becomes dry and hard like other Metal Pastes. Tins, 1d., 2d., 3d., and 6d. each.

Oakey's "Polybrilliant" Metal Powder.

(REGISTERED.)

Produces a most exquisite polish on Brass, Copper, Tin, &c. In fancy Boxes, at 6d. and 1s. each.

Oakey's "Wellington" Furniture Cream.

For cleaning and polishing Furniture, Patent Leather, Oilcloth, &c. Bottles, 6d. and 1s. each.

Oakey's "Wellington" Brunswick and Berlin Black.

For beautifying and preserving Stoves and all kinds of Ironwork. Bottles, 6d., 1s., and 2s. each; and ½ and 1 Gallon Cans.

Oakey's Genuine Emery Cloth.

The best and most economical for all purposes. Each sheet of this quality is stamped "OAKEY'S GENUINE."

Oakey's "Flexible" Glass Paper.

Unequalled for Strength and Durability. Each sheet is Warranted and Stamped "OAKEY'S."

Flint and Garnet Sand Papers.

In Sheets and Rolls, for Machine use.

JOHN OAKEY & SONS, LIMITED

Manufacturers of Emery, Emery and Glass Cloths, Glass, Emery, and Flint Papers, Black Lead, Knife Boards, Pumice, Putty Powder, Crocus, Rouge, Plate Powder, Furniture Polish, Brunswick and Berlin Black, &c.

AGENTS FOR THE SALE OF SCOTCH, TOWN, FRENCH, AND OTHER CLUES.

Wellington Emery and Black Lead Mills, Westminster Bridge Road, London, S.E



REGISTERED TRADE MARK.

80% PROFIT

(PROTECTED.)

BATTLE'S VERMIN KILLER

has the largest sale of any Vermin Killer, and is recognised as the most reliable. It affords splendid profits, and also the fact of it being necessary to register its sale gives the Chemist an excellent opportunity of making his customers' better acquaintance and through them gaining others. It puts you into touch with your customers over a matter in which your assistance is of the greatest utility. It is on the P.A.T.A. List at 3d., 6d., and 1s. each; 3 1s. for 2s. 6d.

WHOLESALE OF ALL PATENT MEDICINE AND SHIPPING HOUSES.

Battle, Son & Maltby,
LINCOLN.

"Albatum or White Rouge"

(Trade Mark)

GIVES A BRILLIANT AND LASTING POLISH TO ALL

Gold, Silver and Plated Goods.

CONTAINS NO MERCURY.

THE ORIGINAL AND ONLY GENUINE "ALBATUM"
can be obtained from

BRADLEY & BOURDAS,

6 Pont Street, S.W., LONDON.

Telegrams: "BOURDAS LONDON" Telephone: 753 GERRARD.

PATTINSON'S

PATESIA TRADE MARK MAGNESIA

MAGNESIA

CARBONATE, CALCINED, AND FLUID.

THE WASHINGTON CHEMICAL CO., LIM., WASHINGTON, COUNTY DURHAM, ENGLAND.

London Agents—Messrs. CLIFFORD CHRISTOPHERSON & CO., 21 Mincing Lane, London, E.C.

GLASS BOTTLES

OF EVERY DESCRIPTION FOR CHEMISTS, DRUGGISTS, PERFUMERS AND KINDRED TRADES.

PRICES ON APPLICATION.

J. B. GAASCH, ANTWERP, 23 Rempart St. Georges.

Cables: BOTTLE-ANTWERP.



GLASS

OF EVERY



SHOP ROUNDS, DISPENSING FLATS. OVALS, ETC.

PHIALS; COUGH MIXTURE PANELS;

LARGE STOCKS.



BOTTLES

DESCRIPTION.



POISONS; SCREW-CAPPED POMADES, OPAL POMADES; ESSENCES, LIMES, ETC., ETC.

PRICES ON APPLICATION.



E. YOULDON, Ltd.

ESTABD. 1840

CARTER ST., MAPLIN ST., MILE END, E.

Telegraphic Address: "YOULDON LONDON."

Telephone: 132 EASTERN

INDIA.

PEAKE, ALLEN & CO.

CHEMISTS, DRUGGISTS,

AND

GENERAL MERCHANTS,

LUCKNOW, OUDH, INDIA,

Possess exceptional facilities for the introduction of NEW SPECIALITIES, Patent Medicines, Druggists' Sundries, Perfumery, &c.

EVERY GENUINE PACKAGE



BEARS THIS LABEL.

EWEN'S LARD

is the ONLY LARD that is made exclusively for Pharmaceutical and Perfumery preparations, and is the

BEST AND MOST RELIABLE

Guaranteed B.P. Lard on the Market.

HARRISON & WAIDE

Have for upwards of a quarter of a century made a special study in the interests of **Chemists and Drug Stores** as regards their

PRINTING

Requirements, and have received **oral and written praise** from many hundreds of their clients from all parts of the British Empire. **Medical Printing** can only be supplied in a satisfactory manner by those who make it a "**specialty.**"

HARRISON & WAIDE

Medical Printers,

:: LEEDS ::

Smart, attractive, catchy Printing of every description. Set of Samples, 6d. For Colonies, 10 6, which is credited to £5 orders.

FRED[K.] FINK & CO.

10 & 11 MINCING LANE, LONDON, E.C.

SPECIALITIES: Dextrine—Gum Arabic—Gum Tragacanth—Pure Beeswax—Ceresine Wax—Honey, &c.

70% profit on outlay. P.A.T.A. **3d.** Wholesale, **2ls.** gross.

Goodman's Corn File.

Mounted on well designed and engraved cards of 1 doz.

SELLS AT SIGHT. Send 3*s.* 6*d.* for two cards, carriage paid, from T. C. LINDSAY & CO., Ltd., Sole Makers, 17 Leather Lane, LONDON, E.C.

Or may be obtained through any of the wholesale houses at 1/9 doz.

See ANTI-CUTTING RECORD for July, page 155.

OSCAR WATTENBACH,

5 LEONARD STREET, FINSBURY, LONDON, E.C.

Telegraphic Address: "WATTENBACH, LONDON."

WHOLESALE AND EXPORT ONLY.

DRUGGISTS' SUNDRIES. Surgical Rubber Goods. Enemas, Injection Bottles, Douches and Syringes of every description. Rubber Sponges, Feeding Bottles, Baby Comforters. Surgical Glass, and Enamelled Iron Ware. Trusses, Bandages, Glass Bottles used by Druggists, Perfumers, &c. Specialities, and Sundries of every Description.

Dentistry

FOR DENTISTS AND CHEMISTS REQUIRING RELIABLE WORKMANSHIP.

Most Perfect Workmanship. Best Materials, and Artistic Finish Guaranteed.

My Assistants are the pick of the London Dental Mechanics.

Price List of **A. G. FENTIMAN,** 42 Bishopsgate Without, LONDON, E.C.

Telegrams: "FENTIDENT LONDON." Telephone: London Wall, 7

TOBACCOS! CIGARS! CIGARETTES!

Every known Brand at Manufacturer's own List Prices. Endless variety of Tobacconists' Fancy Goods & Shop Fittings. The Trade only supplied. Opening orders a Speciality. Send for Price List.

SINGLETON & COLE, Ltd., Cannon Street, BIRMINGHAM. AND BRANCHES.

First-Class Mechanical Dentistry.

Reliable workmanship. Popular prices. Moderate charges for gold, D.A., Tubes, Seamless Gold Crowns, Sections, Vulcanite, &c. Ash's and D.M.Co. Teeth and Rubber guaranteed. Punctuality strictly observed. List free. Trial case solicited. Gold and D.A. work a speciality. Special cheap rates for show case pieces. 14 years' experience of first-class mechanical dentistry.

E. C. HALDER, 46 New Cross Road, LONDON, S.E.

GRAPELAX. By Special Appointment to the Greek Royal Family.

The Ideal Tonic Laxative for Children.

GRAPELAX pleases the Trade. It is on the P.A.T.A. list with remunerative terms.

GRAPELAX pleases the Medical Profession. There is no mystery or secret.

GRAPELAX pleases the Public, for it is a genuine and effective and a palatable medicine for Children.

Order from the Wholesale houses, or direct from **GRAPELAX, LTD., 379 STRAND, W.C.**

GEORGE HAYNES & CO.,

Hampstead Cotton Mills, Stockport,

MANUFACTURERS OF

BLEACHED AND ABSORBENT COTTON WOOLS, SURGEONS' AND HOSPITAL LINT, BANDAGES, &c., &c.

FIVE GOLD MEDALS, FIVE SILVER MEDALS, AND DIPLOMA OF HONOUR. The Highest Awards Given to any Cotton Wool or Lint Manufacturers.

Telegraphic Address: "HAYNES STOCKPORT."

PRECIPITATED CHALK.

EXTRA LIGHT AND ALL GRADES TO SUIT EVERY PURPOSE.

CHEAPEST SELLERS IN THE MARKET.

AUG. LEVERMORE & CO., 8, 9 & 10, Great St. Helen's, LONDON, E.C.

TELEGRAMS: "LEVERMORE, LONDON." TELEPHONE: 4613 CENTRAL

PATENTED **SICCOGEN** PATENTED

For Carbonic Acid Baths against Perspiring Hands or Feet, for Over-Exertion, Fatigue and Lassitude.

40 Pieces 10s. net, c.i.f. London.

CHEMICAL LABORATORY. DRUGS AND HERBS EXPORTED. Specialty: OIL OF JUNIPER BERRIES.

FREDERICK DETSINYI, Budapest, Hungary.

Depots wanted in England, Ireland, the Colonies, China and Japan.

SPECIALITY:

880s LIQUOR AMMONIA

Pure by Chemical Analysis. Equalled only by VOLCANIC AMMONIA.

Sold to large Wholesale Drug Houses over 30 years, and has given the highest satisfaction.

BROWN & BLACKBURN, (Sales Dept.) **THONGSBRIDGE,**

ESTAB.] **HUDDERSFIELD.** [1876.

EVERY DESCRIPTION OF

SPREAD PLASTERS—Surgical, Medical, Porous, &c.

(Rubber and Plumbi Base),

BANDAGES, SURGICAL DRESSINGS

Sole Agents in Great Britain for

Rumpf's Crêpe and Lisle Bandages ("The Geneva").

LESLIES, Ltd., Spencer House, South Place, Finsbury, E.C.

"SILVERY WHITE GUTTA PERCHA ENAMEL" TOOTH STOPPING



P. A. STEVENS, *Surgeon-Dentist,* **Mansfield Rd., S. Hampstead, N.W.,** Sole Proprietor & Manufacturer.

TRADE MARK. Registered No. 2745. Special Terms to Wholesale Houses for Sheets or Sticks stamped with their own name. A sample box of 3d. sticks sent post free for 12 stamps. Price list and sample free.

DOG AND CAT MEDICINES will increase your Sales.

LIBERAL TERMS. HIGH CLASS GOODS.

Books on Disease, Show Cards, and Pedigree Forms sent free.

THE "WILSON" VET. MED. MANUFACTURING Co., Ltd.

Telephone No. 41 Ashford. **ASHFORD, MIDDLESEX.**

DIABETES

C. VAN ABBOTT & SONS, London, S.E.

Manufacture all foods for above.

Established 1859.

Tel. 17018 Central. Telegraphic Address: "Glutens London."

DIABETES

FOODS AND GLUTEN PRODUCTS.

CALLARD & CO., 74 Regent St., LONDON.

DENTISTRY
(Mechanical.)
EXPERT WORKMANSHIP. PROMPT SERVICE.
POPULAR PRICES. GUARANTEED MATERIALS.
"Dentistry for Chemists" post free. "Everyday Dentistry," 3/6.
F. C. WARDALE & CO., 132 High Street North, East Ham.
Tel. No. East Ham 174. Tel. Address "Eladraw London."

DENTISTRY FOR DENTISTS
by FENTIMAN & CO. (A. J.),
Practical Dentists in Gold, D.A., Tubes, Crowns, Gum Sections, Vulcanite, Celluloid, Strengthened Rubber, Reg. Cases (Angles'), Obturators, &c.
Telephone: 9977 London Wall. Telegrams: "Lullingly London."
Postal—East Smithfield, Tower Bridge. Established 1835.
NO OTHER ADDRESS.

KARSWOOD CREOSOTE For Cold in the Head, Asthma, Influenza, &c.
Prices 11/-, 27/-, 42/- per dozen, less 15%.
Minimum Retail Price, 1/-, 2/6, 4/- per bottle.
Carriage paid on 3 doz. lots. P.A.T.A. conditions. [2]
E. GRIFFITHS HUGHES, Chemist, 17 Deansgate, Manchester.

ANTI-OPIUM CURE.
COMBRETUM SUNDAICUM
Supplies from (or CHONG HING).
C. F. GERHARDT, 5 Fenchurch St., London, E.C.
Telephone: 1039 CENTRAL.

J. W. PINDAR & CO.
Druggists' Engineers.
PILL MACHINERY, D.A. Tincture Presses, Emulsifying and Mixing, Corking, Mixing and Sifting Machines, Moulds
GRINDING AND OINTMENT MILLS.
New Illustrated Price List on application.
BROCKLEY, LONDON, S.E.
Please Note our Telephone Number: DEPTFORD 1065.

MAWSON & Co.'s
Medicinal and Veterinary Capsules, etc.
Accurate, Reliable, Moderate Price.
List and Samples on application.
213 High Rd., STREATHAM, LONDON.
Tel. 816 Streatham.

DR. HOFFMANN'S CELEBRATED RHEUMATIC POWDERS.
Act like a miracle. Relief is felt after the first dose.
Will cure permanently all forms of Rheumatism, Sciatica, Gout, Neuralgia, &c. Endorsed by the leading Medical Profession and General Public in all parts of the world.
Price 9/- per doz., Retail 1/1½; 28/- per doz., Retail 2/9.
INTERNATIONAL CHEM. CO., 324 Caledonian Road, N.
Sole Proprietors Sanquo Weight Producer (Capsules)

TO LET.

INSECTICIDES
AND
HORTICULTURAL REQUIREMENTS.
Write for particulars to:—
WALTER VOSS & CO., LTD., Millwall, London, E.

CARBOLIC ACID.
Crystals, Liquid, Crude, Refined. Soluble Disinfectant Fluids and Powders, &c.
WHOLESALE AND EXPORT ONLY
HOLLINGSHURST & CO., 112 FENCHURCH ST., LONDON, E.C.

ESTABLISHED 1886.
W. G. NICHOLLS & Co.
TRADE MARK
Wholesale and Export
Wire and Bristle Brush Manufacturers,
66 CLIFTON ST., FINSBURY, E.C.
Tube, Flue, Feeding Bottle, Fancy Pipe Condenser & Decanter, Chemical, Mineral Water and Beer Bottle Brushes.
No connection with others assuming same name.

7/3 IS THE COST OF A DOZEN ASSORTED
Christy's Rose Pots
CHRISTY'S, 4 OLD SWAN LANE, E.C.

Prosthetic Dentistry.



THE LEADING LONDON SPECIALISTS IN DENTAL MECHANICS TO THE PROFESSION.
Terms Moderate. ——— Punctuality Guaranteed.

Messrs. LAST & WHITE,
10 Great Pulteney St., Golden Square, LONDON, W.
Telephone: 7177 CENTRAL. Telegraphic Address: "PROSTHETA LONDON."

PATS. **PAPER** PENDING.

COLLAPSIBLE TUBES

CLEAN! HYGIENIC! EFFECTIVE! CHEAP!

We are open to negotiate with large Wholesalers and Packers for the supply of these tubes—empty or filled. Apply:

Evenden's Pure Extracts, Ltd., Hastings.



Express Developing Co.

(REGISTERED.)

OUR ANNOUNCEMENTS WILL APPEAR IN THE FIRST ISSUE OF EVERY MONTH.

Telephone Number LONDON WALL 4793.

THE TRADE HOUSE FOR PHOTO ENLARGEMENTS AND COLOURED MINIATURES.

WE CATER EXCLUSIVELY FOR CHEMISTS.
Their requirements are our special study.

Roll Films developed and despatched day after receipt.

CARBONS. PRINTING IN ALL PROCESSES. POSTCARDS.

WRITE FOR PRICE LIST AND PARTICULARS OF OUR PROFITABLE SIDE LINES.

EXPRESS DEVELOPING CO., 86 High Street, Whitechapel, E.C.

ROBARE'S AUREOLINE

Or GOLDEN HAIR WASH.

4-oz. Bottles, 33/- 10-oz. Bottles, 66/- per doz.

Wholesale from R. HOVENDEN & SONS, LTD., and from all the principal Patent Medicine Warehouses in London.

SELL AT SIGHT.

DR. NELSON'S MEDICATED LOOFITE SOCKS.

Impregnated with Boracic Acid, Pine Oil, &c. Patented.

ONCE WORN, ALWAYS WORN.

Now on the P.A.T.A. 4/- per dozen, 46/- per gross. Retail, Face Value, 6d. per pair.

JOHN MORGAN DAVIS & SONS, 89 Bishopsgate Without, LONDON, E.C.

ESTABLISHED 1838.

LARGEST SALES! QUICKEST TURNOVER!

WORTH A GUINEA A BOX.

BEECHAM'S PILLS

FOR ALL

Bilious and Nervous Disorders,

Sick Headache, Constipation,

Wind and Pains in Stomach, Impaired Digestion,

Disordered Liver, and Female Ailments.

The Sale now EXCEEDS SIX MILLION BOXES per annum.

Druggists will find BEECHAM'S PILLS the MOST SALEABLE Patent Medicine in the Market.



Contains 56 Pills.

BEECHAM'S COUGH PILLS

STAND UNRIVALLED FOR

Coughs, Asthma, Bronchial Affections, Hoarseness, &c., &c.

In Boxes, 1s. 1½d. and 2s. 9d. each, with full directions.

BEECHAM'S TOOTH PASTE

RECOMMENDS ITSELF.

It is Efficacious, Economical, Cleanses the Teeth, Perfumes the Breath, and is a Reliable and Pleasant Dentifrice.

In Collapsible Tubes, of all Druggists, ONE SHILLING each

Home Retailers of **BEECHAM'S PILLS** desirous of exhibiting Show Cards or Dummies, and wishful to have a good supply of Handbills (various sizes and colours, with name and address at foot), Oracles, Puzzles, &c., should apply to the Proprietor—

THOMAS BEECHAM, ST. HELENS, LANCASHIRE.

THIRTY-FIVE YEARS OF PROGRESS.

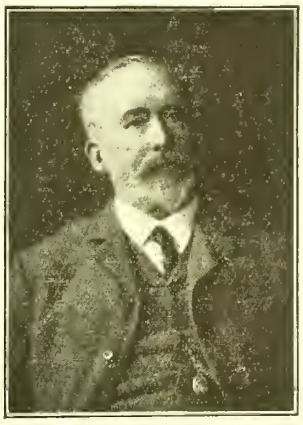
THE FOLLOWING REPRINT FROM "THE CHEMIST & DRUGGIST" OF JUNE 5, 1909, MAY INTEREST MANY OF OUR FRIENDS IN ALL PARTS OF THE WORLD.

THE announcement was made in our issue of May 22 of the conversion of the business of Messrs. May, Roberts & Co. into a private limited liability company. This has been done for family and private reasons. It is nevertheless appropriate to recall the fact that the foundation of the firm lay in the acquisition by Mr. Samuel Roberts, in 1874, of Messrs. Dixon, Dean & Co.'s business, 14, 15 and 16 Cow Cross Street, Smithfield, London, E.C. This business, which was principally in perfumery, was originated at Islington by Mr. Wm. Dixon. The first six years' trading at Cow Cross Street (1874–1880) resulted as Mr. Roberts tersely put it to a *C. & D.* representative—"We made no money." The bold expedient of dismissing the firm's five travellers was resorted to; "consequently," added Mr. Roberts, "most of the customers forsook us, and many predicted an early grave, but the business has never gone back since—always forward." The firm advertised in the *C. & D.* The following chronicle shows how the business has grown:

1883. Removed to larger premises at 9 Clerkenwell Road, of which May, Roberts & Co. were the first tenants.
1885. The premises were burnt out in the great Clerkenwell fire on October 8, when forty-two firms were affected and 5,000 hands thrown out of employment. The following day Mr. Roberts had advised his customers that he had hired a warehouse in Moor Lane, City of London (*C. & D.* 1885, p. 607).
1886. Re-entered premises at 9 Clerkenwell Road.
1893. Premises doubled by adding No. 11 Clerkenwell Road.
1902. Dublin branch opened in Westmoreland Street and second floor of No. 13 Clerkenwell Road added.
1904. Top floor of No. 13 added.
1905. First floor of No. 13 taken over.
1907. Dublin premises doubled.
1908. No. 7 Clerkenwell Road added and fittings throughout modernised (*C. & D.* 1908, II., p. 126).



Mr. C. Roberts.



Mr. Samuel Roberts.



Mr. F. Roberts.



Mr. A. T. Webb



Mr. W. C. Stewart.

Mr. Samuel Roberts, the founder of the firm, who continues to look after the interests of the company's customers as managing director, is responsible, through his energy, enterprise, and originality, for much of the success, and the principle on which the business is conducted is too well-known to our readers to require further comment. Mr. Roberts has also turned his ability and acumen to public account, as his keen interest in postal reform, especially in connection with the halfpenny postal packet, has had much influence in obtaining concessions of great value to commerce. Of his co-directors, Mr. W. C. Stewart is the manager of the London establishment. He joined the firm in 1897, after obtaining commercial experience on the Continent. Mr. Ashley T. Webb has been with the firm since leaving school in 1895. He is responsible for the home correspondence and the "patent-medicine" department. Mr. Calvert Roberts is the Dublin manager, and, together with his brother, Mr. Frank Roberts, commenced with May, Roberts & Co. by opening the Dublin branch in 1902. The conduct of the business will in no way be changed, and May, Roberts & Co., Ltd., will endeavour to continue the past pleasant relationship with their customers.

MAY, ROBERTS & CO., LIMITED, Clerkenwell, London, E.C.

PRICE LIST, 1909.

Issued--1st Feb. and 1st Aug.

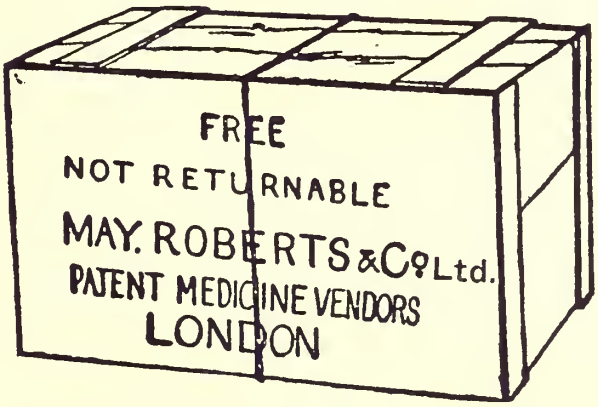
"SUNDRIES"

QUALITY RIGHT.
PRICE RIGHT.
CARRIAGE PAID.

£2 WORTH

CARRIAGE PAID

BOTTLES
BRUSHES
COMBS
FEEDERS
TEATS
SPRAYS



ELASTIC STOCKINGS
CLINICAL THERMOS.
TRUSSES
URINALS

LIST AND TERMS POST FREE.

MAY, ROBERTS & CO.

LIMITED.

LONDON and DUBLIN.

CADBURY'S COCOA

A DELICIOUS BEVERAGE AND AN INVALUABLE FOOD.

"APENTA"

In order to prevent the unreasonable cutting prices which several Firms have adopted in retailing **"APENTA" WATER**

The Apollinaris Company, Ltd.

have decided to protect the price to the public at

11d. per large bottle,

and the following conditions will now be attached to each invoice :

"APENTA" WATER, as invoiced herewith, is sold to you subject to the following conditions :

(1) That it will not be sold to the Trade below the minimum Wholesale Price of

20s. per case of 25/1 Bottles

or retailed to the public below

11d. per large bottle.

(2) That it will not be sold by you to any Firm whom we may ask you not to supply in consequence of their cutting prices.

Acceptance of the goods will be taken as an Agreement to carry out the above conditions.

Printed for the Proprietors by SPOTTISWOODE & Co., LTD., New-street Square; and Published by the Proprietors at 49 Cannon Street, in the City of London.—*July* 31, 1909.